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**Hale's Handful . . .
Up from the Ashes**
*The Forging of the Seventh Air Force
from the Ashes of Pearl Harbor
to the Triumph of VJ-day*

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Dedication

This study is dedicated to my dad, Sherman K. Ellis Jr., who was a naval aviator flying PB2Y-4 Coronado seaplanes out of Saipan in World War II. Dad died when I was young, so I never got to hear stories of his combat experiences firsthand. Mom, however, shared with me that for months after the war if she accidentally nudged him in his sleep, he would bolt upright in bed, reaching for a pistol that was not there. That was the genesis of my desire to learn more about the nature of combat experienced by US forces in the Central Pacific in World War II.

In an old scrapbook, along with pictures of the huge, four-engine Coronado seaplanes daddy flew, there is a letter he wrote to my mom in 1945 discussing some of what he did, since by then the war had just ended and censorship had been eased. "Our destination was Saipan and our mission was antisubmarine patrol to keep the sea-lanes to Okinawa open. Fifteen-hour flights, each one covering over a hundred thousand square miles with our search radar. Not a single ship of the huge invasion and supply convoys was sunk or damaged by a Jap sub in this area during the time we patrolled it."

Unlike some naval personnel discussed in this study, I think my dad would have understood the nature of the combat the Seventh Air Force bomber crews endured in the Central Pacific during World War II. I suspect, though, that he would have been quick to add that he and his Navy buddies did it better.

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Abstract

This study analyzes the evolution of Seventh Air Force's joint command and control (C²) relationships as well as the development of joint operational procedures and doctrine in the Central Pacific during World War II. As this was arguably the most joint theater in World War II, there are many lessons about the challenges of joint C² and the development of joint combat procedures that are relevant to contemporary airmen.

The Seventh Air Force was established in the aftermath of the attack on Pearl Harbor. It was initially a defensive and training-oriented command—protecting Hawaii from a possible attack by the Japanese and training replacement crews for units in the South Pacific. However, in the summer of 1943, the Seventh Air Force became an offensive, mobile combat command that—along with each of the other services—played a major role in the island-hopping campaign of World War II. Maj Gen Willis H. Hale served as the commander of the Seventh Air Force during this transition period. This study uses him as a lens to explore the unique challenges his command met and overcame. Additionally, since the Pacific theater was on the tail end of the “Europe first” resupply policy, the Seventh Air Force was chronically undermanned and underequipped—hence the moniker Hale's Handful.

This study asks three questions in examining the development of joint C² and operational procedures in the Central Pacific. The first question is to what extent did personalities drive the evolution of C² relationships, and did they have an affect on the effectiveness of combat operations? This question takes on significance as this study explores General Hale's rather stormy relationship with his naval superior, Vice Adm John H. Hoover. Along similar lines, the second question is to what extent did service cultures affect C² and the development of joint doctrine? The third question is to what extent did this theater's unique geographic challenges affect interservice friction and the effectiveness of combat operations?

This study concludes that all three issues influenced the development of, and effectiveness of, joint C² and combat procedures in the Central Pacific, though not always in negative ways. On the one hand, service culture tended to aggravate an already stormy interpersonal relationship between General Hale and Admiral Hoover. On the other hand, the severity of the unique challenges in the Central Pacific tended to ameliorate personality conflicts and service parochialism as the services learned that only through teamwork could the challenges be overcome.

Despite harsh lessons and early setbacks such as the costly victory at Tarawa, by the end of the war the three services' air forces developed a level of interoperability and shared doctrine that we do not have today. Additionally, this study found that interdiction and close air support (CAS) were as important as strategic bombing to the success of the island-hopping campaign. While the Central Pacific in World War II is not the only time US forces have had to relearn the importance of CAS, this example stands as a model of interservice airpower that can be useful to airmen today.

About the Author

Maj (Lt Col-select) Peter S. H. Ellis (BA, Texas Lutheran University; MA, Webster University) received his commission in 1986 and was an honor graduate of both Officer Training School and the Personnel Officer Technical School. He has served in a variety of field and staff tours. He was a section chief in the Military Personnel Flight (MPF) at Offutt Air Force Base (AFB), Nebraska, and served as executive officer at Lindsey Air Station, Germany. Major Ellis was chief of the Quality Force Branch at Headquarters Air Materiel Command, Scott AFB, Illinois, followed by a tour as the MPF chief at Osan Air Base (AB), Korea, and then was the chief of the Commanders Action Group at the Air Force Personnel Center, Randolph AFB, Texas. He was selected as the Outstanding Personnel Officer in the Air Force for 1994, and his MPF at Osan was selected as the best in the Air Force that same year. Major Ellis is a distinguished graduate of the Air Command and Staff College and a 2000 graduate of the School of Advanced Airpower Studies (SAAS). Upon graduation from SAAS, Major Ellis was selected to command the 52d Mission Support Squadron, Spangdahlem AB, Germany.

Acknowledgments

I would like to acknowledge several people who have been a tremendous source of guidance and encouragement in accomplishing this study. From the beginning, my advisor, Dr. James S. Corum, had a clear vision of what this study could be; and he helped to keep me motivated and focused throughout the process. My reader, Dr. Harold R. Winton, is a superb editor and organizer who had his hands full troubleshooting my natural inclination toward literary meandering. I am grateful to them both.

I would also like to thank Mr. Thomas B. Buell and Capt Alexander Monroe, USAF, retired, for providing me with valuable insights into the interrelationships among Navy, Marine, Army, and Army Air Force leadership in the Central Pacific theater during World War II. Additionally, Dr. James Mowbray of the Air War College is conducting extensive research to write a comprehensive operational history of the Seventh Air Force in World War II, and he provided invaluable insight into the various command and control relationships of the Seventh Air Force throughout the war.

There are two acknowledgements I would like to make of a personal nature. First, during the writing of this study, friends of our family, Mr. Dan Loring and his wife Mary came to visit us on their way to Florida. Dan was a B-25 Mitchell pilot in the China-Burma-India theater in World War II, and during their stay with us he shared some of his combat experiences with me—evidently going in low and fast with twelve .50-caliber machine guns on full could really tear up some stuff! Listening to Dan gave me an appreciation of what it must have been like for the Seventh Air Force Mitchell pilots going in low over Maloelap in the Central Pacific, and it gave me renewed motivation for this work when I really needed it. Second, I want to thank my mom, who has been a constant source of encouragement throughout this tough but rewarding year at the School of Advanced Airpower Studies. I could not have done this work without her steadfast support.

Chapter 1

Introduction

The Seventh Air Force grew out of the ashes of the attack on Pearl Harbor and was initially established to provide defense for the Hawaiian Islands and to serve as a "feeder" command to orient incoming troops to the theater, then distribute them to other combatant commands. However, despite chronically low manning and equipment shortages, beginning in the summer of 1943, the Seventh Air Force transitioned from a defensive and training-oriented command to an offensive, highly mobile combat command. Hale's Handful—as the initial small Seventh Air Force came to be known—took on the challenges of strategic bombing, island air defense, and close air support (CAS) as part of the US forces drive through the Central Pacific theater.

The Subject and Its Relevance

The story of Seventh Air Force's contribution to combat operations in the Central Pacific during World War II is more than just a chronology of battles and missions flown in support of the famous and often written about "island-hopping campaign" that ultimately led to the defeat of Japan. It is also the story of a unique command, facing and surmounting unique challenges in its quest for victory—challenges that still exist today.

For example, the Pacific theater was a Navy-dominated, Navy-led theater. Therefore, when the Seventh Air Force began sustained offensive combat operations in the summer of 1943, Maj Gen Willis H. Hale (commander, Seventh Air Force) worked for, and his aircraft were under the operational control of a Navy admiral (Vice Adm John H. Hoover).¹ According to Samuel Eliot Morison, in his multivolume *History of United States Naval Operations in World War II*, the command structure of Army Air Forces (AAF) under an admiral was "old news" in the South Pacific where it worked "beautifully."² However, in Morison's opinion "owing . . . to certain personalities, it did not work well in the Central Pacific."³ This and other sources noted in this study will lend credence to the notion that "personalities do matter."

However, apart from personalities, there were significant differences in the nature of the combat between the Central Pacific and the South or Southwest Pacific that affected the way interservice tensions and interservice procedures developed in the Central Pacific.⁴ For example, the distances between objectives were far greater in the Central Pacific than in the Southwest Pacific. In the Southwest Pacific land-based air could usually support all but the longest advances of the campaign. However, in the Central Pacific virtually all prebombardment had to be unescorted (often

pushing the bombers to the limits of their range), and carrier air had to provide close support to the troops until an airfield could be captured and land-based fighters brought forward to help.⁵ Understandably, the development of joint procedures for close support operations evolved differently in the Central Pacific, based on the unique challenges inherent to that theater of operations.

Additionally, objectives in the Southwest Pacific were occasionally large enough for planners to find an undefended beach to use as a springboard for amphibious assault. However, in the Central Pacific, the objectives were so small that they were virtually always defended.⁶ With both unescorted prebombardment missions and amphibious assault landings that were highly contested, it is also understandable that interservice tensions could run high if results from or support for these operations were either ineffective or costly.

The ability to sustain combat operations in the far-flung Central Pacific presented supply, logistic, and morale challenges that demanded a joint team effort to overcome. There were problems, but there was also a good deal of cooperation and ingenuity both within and between services in successfully sustaining the drive through the Central Pacific.

In order to understand airpower in the Central Pacific, both then and now, it is helpful to understand the challenges faced by the men of the Seventh Air Force in World War II and to see how those challenges affected the development of joint command and control (C²) and combat procedures. While combat capabilities and technologies are significantly different today than in World War II, many of the challenges dealt with then are still important operational considerations today, in what remains a high-priority international theater.

Approach and Methodology

This study explores the major challenges met and overcome by the Seventh Air Force in combat operations in the Central Pacific in World War II. In approaching this subject, this study proceeds chronologically, outlining the major campaigns of the drive through the Central Pacific. Within the campaigns, this study addresses joint planning, preparation and support issues, bombing and strike challenges, and developments in CAS of the amphibious operations. This study also focuses especially on joint leadership interactions, C² issues, and the development of joint operational combat procedures.

In examining joint C² and leadership interactions in the Central Pacific, there are several questions helpful in exploring these issues. For one, was it all about personalities, as Morison implied? Clearly, in reviewing several sources it comes as no surprise that General Hale and Admiral Hoover did not "get along." First, Thomas B. Buell described Admiral Hoover as "dour, ill-humored."⁷ Additionally, Capt Alexander Monroe, USAF, retired, related that his father, who served on board the USS *Curtiss* with Admiral

Hoover, stated that he remembered Admiral Hoover—AKA “Genial John”—as a “pretty stern dose of medicine.”⁸ On the other hand, newspaper accounts of General Hale indicate that while he rarely lost his temper, he could deliver a thorough dressing down in nothing more than conversational tones.⁹ However, it should come as no surprise that people who have risen to the flag level might have forceful, dynamic personalities. Moreover, while it is axiomatic to point out that people who have risen to general officer status are not used to being wrong very often, the point is relevant in this case because Admiral Hoover and General Hale had fundamental disagreements on the most effective way to employ airpower.

This leads to the next question: Were the challenges and friction in the Central Pacific a function of different service cultures? After General Hale earned his wings in 1923, virtually all his experience was in heavy bombers.¹⁰ General Hale was inclined to subscribe to massed formations, flying at high altitude, and employing precision bombing techniques, as espoused at the Air Corps Tactical School (ACTS), from which he graduated in 1928.¹¹

On the other hand, Admiral Hoover was a naval air officer who was more inclined to advocate the effectiveness of low-level, single-file bombing runs as practiced by naval dive-bombers.¹² While these are only the opinions of two men operating in a theater of war together, they also reflect differences in the cultures of their services as well. For example, the Navy was understandably concerned about fleet safety from Japanese submarines and bombers (and later Kamikazes). Accordingly, they were also concerned about close support for the Marines, and advocated “h--l-for-leather” tactics that meant a quick exit for Navy carriers from the threat of Japanese submarines during the island assaults.¹³ The Army, conversely, tended toward a more methodical advance after intensive artillery preparation.¹⁴ These tactics also lent themselves more to the AAF’s preference for independent, massed bombing of deeper targets. With these cultural proclivities and alignments, it appears that some of the friction experienced in the Central Pacific has cultural and doctrinal roots—and also, that the services in the Central Pacific did not understand and/or appreciate the nature of each other’s combat challenges.

Another question that must be asked: Were the challenges faced by the services in combat in the Central Pacific unique in and of themselves, leading inevitably to friction? As noted above, even a cursory comparison of the differences between the Central Pacific and the Southwest Pacific theaters would tend to argue an answer in the affirmative. The unique nature of the challenges faced by the Seventh Air Force in the Central Pacific also added to the lack of understanding between services.

General Hale was commander of Seventh Air Force from June 1942 to April 1944, and then served as commander, Task Force 59 (COMAIRFORWARD) through the end of 1944. It was his leadership that drove Seventh Air Force’s transition to an offensive, mobile combat command, and directly contributed to the success of Seventh Air Force through the majority

of the island-hopping campaigns. Therefore, this study uses General Hale as a lens to explore the unique challenges his command met and overcame in the Central Pacific.

Review of Literature

The story of the Seventh Air Force in World War II has not been covered in much detail in published works. Kenn C. Rust's *Seventh Air Force Story* provides a fairly short operational history of the Seventh Air Force, while Wesley Frank Craven and James Lea Cate's *The Army Air Forces in World War II*, vol. 4, *The Pacific* covers some Seventh Air Force operations in a general manner. Nevertheless, these were important sources for outlining the chronology and historical accounts of some of the events cited in this study. E. B. Potter's *Nimitz*, Buell's *The Quiet Warrior*, and Morison's *History of United States Naval Operations in World War II*, vols. 7 and 8, served to provide a Navy perspective on operations in the Central Pacific during World War II. These sources, as well as personal correspondence with Buell and Captain Monroe, also provided valuable insights into the interrelationships among Navy, Marine, Army, and AAF leadership during this period.

Little has been written about the development of command relationships and joint operational procedures involving the Seventh Air Force in the Central Pacific. The most detailed accounting of Seventh Air Force command relationships is found in Craven and Cate's *The Army Air Forces in World War II*, vol. 4, *The Pacific*, and the previously cited works by Rust, Buell, and Morison add important insights into the context of these relationships. In addressing joint operational procedures, the previously cited work by Craven and Cate presents the most information, followed by the work by Rust, though neither work is comprehensive in this area. Much of this study has relied extensively on original source documents found at the Air Force Historical Research Agency (AFHRA), especially in detailing the development of close support operations and Seventh Air Force doctrine.

Additionally, source documents from the AFHRA provided most of the information regarding General Hale, as well as providing insights into the nature of combat for Seventh Air Force in the Central Pacific. Adding an Army perspective to the context of joint operations in the Central Pacific was a report of a trip through the Central Pacific by Col Claudius H. M. Roberts—"Marshall Islands Japanese Defenses and Battle Damage," found in the US Army Center for US Military History, Carlisle Barracks, Pennsylvania.¹⁵

Organization

Chapter 2 discusses the early years in which the Seventh Air Force was forged from the Hawaiian Air Force in the aftermath of the attack on Pearl Harbor on 7 December 1941. It highlights the defensive nature and training

roles played by the Seventh Air Force up to its participation in the Battle of Midway. The Battle of Midway is examined in-depth because it provides insight into the source of a good deal of friction between the Navy and the AAF in general, and specifically among the senior leaders in Seventh Air Force's direct operational chain of command. Then there is focus on the background and character of Seventh Air Force's commander during this period. A brief outline gives the development of the operational C² relationships for Seventh Air Force from 1940 to 1945.

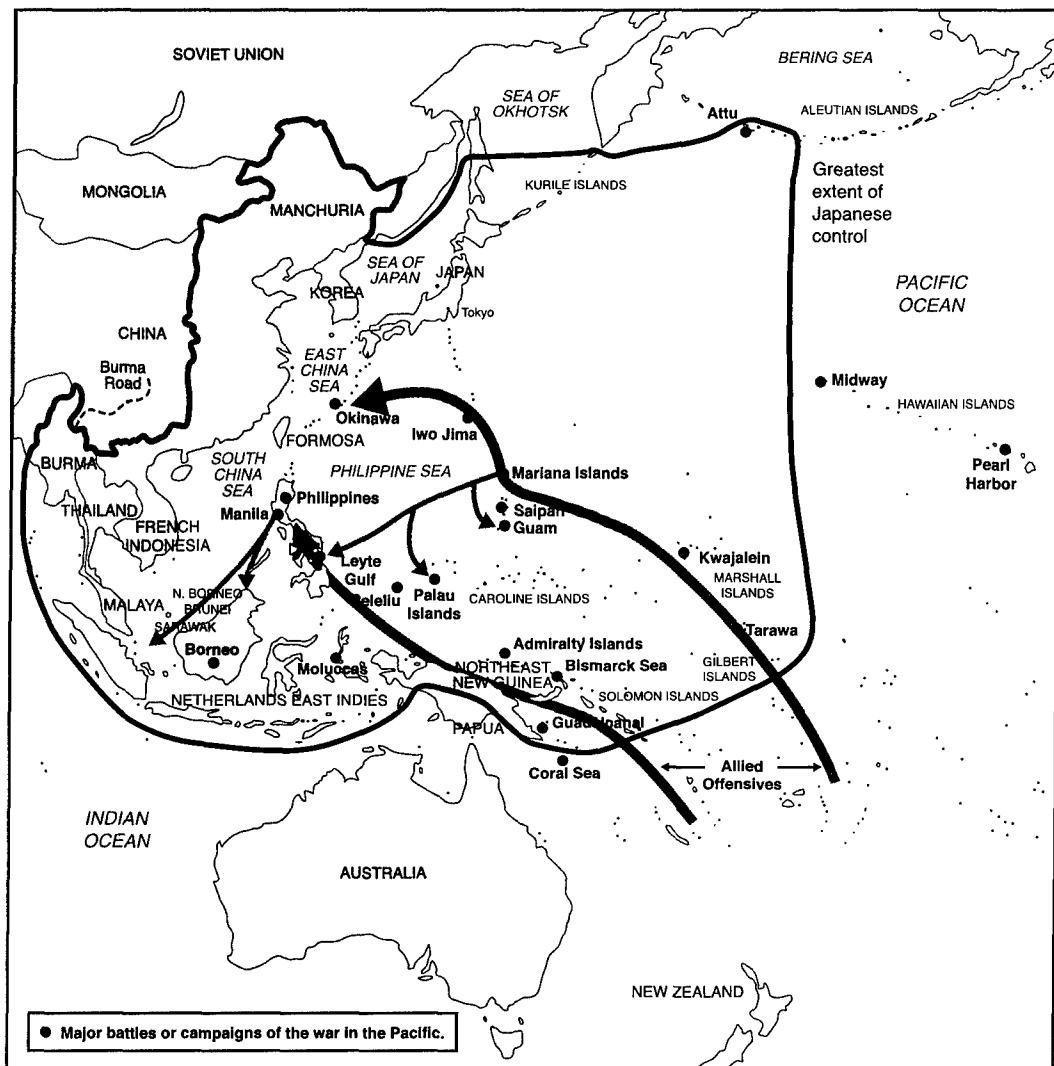
Chapter 3 provides an in-depth treatment of Seventh Air Force's role in the early island-hopping campaigns through the Gilbert and the Marshall Islands. The Gilbert and Marshall campaigns are discussed separately, and within each campaign there are separate sections focusing on planning and preparation, bomber operations, and close support operations. The major island groups in the Central Pacific are shown (see map titled the Pacific theater). Additionally, this chapter provides some examples of the unique and harrowing nature of combat Seventh Air Forces endured in the Central Pacific—examples not widely known because the Seventh Air Force did not receive much press as compared to the exploits of naval forces in this Navy-dominated theater. Combat in the Pacific theater, in general, received less coverage than the combat exploits in Europe.¹⁶ These examples serve to highlight a general lack of understanding of the nature of Seventh Air Forces' combat—especially by the Navy.

Chapter 4 outlines the role of Seventh Air Force in the later campaigns of the Central Pacific—the neutralization of the Carolines, the Marianas campaign, the assault on Iwo Jima, and the attack on Okinawa. This chapter examines closely the events and issues surrounding the decision to have General Hale relinquish command of the Seventh Air Force in order to assume command of Task Force 59 as COMAIRFORWARD—operationally controlling all shore-based airpower in the forward area. This chapter also highlights the emergence of mature CAS joint procedures that were tested in the largest and final battle of the Central Pacific—Okinawa. This chapter closes with an assessment of the Seventh Air Force's unique contribution in providing very-long-range (VLR) fighter escort and fighter strike missions from Iwo Jima and Okinawa against mainland Japan and Korea.

Chapter 5 discusses broad conclusions derived from the evidence presented in this study. Specific findings address the effect of personalities, service cultures, and the unique challenges of the Central Pacific on the development of joint C²; and operational procedures are discussed.

Conclusion

Despite its significance, the accomplishments of the Seventh Air Force in the Central Pacific in World War II have largely gone unsung. It was the first air force to feel the weight of the enemy at Pearl Harbor where it was also the first to draw enemy blood.¹⁷ Out of the ashes of Pearl Harbor grew a small command, mostly focused on defense of the Hawaiian Islands and



Source: The Pacific Theater, Up the Ladder; Cartography Division at Indiana State University (http://baby.ind-state.edu/edu/gga/gga_cart/gecar127.htm); taken from the Historical Map Bibliographies World War II Maps compiled by Melinda Mosley, Air University Library, Maxwell AFB, Ala., August 1999.

The Pacific Theater

as a training command for replacements to the Southwest Pacific. While it would never relinquish these duties, the Seventh Air Force would soon go on the offensive, developing into a highly mobile, combat command with challenges unique to any other theater of combat. It flew distances in combat longer than any other air force, and no other air force employed a wider range of aircraft or performed a wider range of missions.¹⁸

General Hale and his men would start with a blank sheet of paper, and ultimately they would evolve joint command relations and operational procedures that would help win a war. However, in the process of carving out its new role in a Navy-dominated theater, there were growing pains, friction,

and even great personal sacrifices. General Hale would ultimately have to give up command of the Seventh Air Force in order to secure full operational control of air assets, especially heavy bombers, in the forward area.

Moreover, despite Navy dominance of the Central Pacific, this theater represents the only theater in which the Navy, the Army, the Army Air Corps, and the Marines all played major, vital roles in the combat that won the island-hopping campaign in World War II. While having four major players in the Central Pacific understandably generated friction, interservice cooperation gradually improved as the services learned the value of joint cooperation in combat. The greatest example of this growing cooperation lies in the development and emergence of mature joint procedures for effective prosecution of CAS in the Central Pacific.

This study is intended to provide an enhanced understanding of interservice leadership and C² relationships in the Central Pacific in World War II where all the services played indispensable roles in combat. In our ever-increasingly joint environment today—and with our air forces serving under Navy command as recently as operations in Kosovo—the challenges and lessons of the Seventh Air Force in World War II are clearly applicable to contemporary airmen.

Notes

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2. Samuel Eliot Morison, *History of United States Naval Operations in World War II*, vol. 7, *Aleutians, Gilberts and Marshalls, June 1942–April 1944* (Boston, Mass.: Little, Brown and Co., 1951), 211.
3. *Ibid.*
4. Joe G. Taylor, *Close Air Support in the War against Japan*, USAF Historical Study 86 (Maxwell AFB, Ala.: USAF Historical Division, Air University, 1955), 132.
5. *Ibid.*, 133.
6. *Ibid.*
7. Thomas B. Buell, *The Quiet Warrior, A Biography of Admiral Raymond A. Spruance* (Toronto, Canada: Little, Brown and Co., 1974), 216.
8. Capt Alexander Monroe, USAF, retired, E-mail memorandum to Maj Peter S. H. Ellis, 16 March 2000, 9:53 A.M.
9. Forrest Davis, "Hale's Handful," *Saturday Evening Post*, 18 July 1944.
10. Maj Gen Willis H. Hale, Background, AFHRA, Maxwell AFB, Ala., file no. 740.293, 11 April 1944.
11. Buell, 215 and 216; and Maj Gen Willis H. Hale, Biography, AFHRA, Maxwell AFB, Ala., file no. 12-G-30, 16 September 1943.
12. Buell, 215 and 216.
13. *Ibid.*, 216.
14. *Ibid.*, 215.
15. W. D. Mission, "Marshall Islands Japanese Defenses and Battle Damage," US Army Center for US Military History, Carlisle Barracks, Pa., 1 March 1944.
16. Davis.
17. History, Seventh Air Force, 2.
18. *Ibid.*

Chapter 2

Beginnings—The Forging of Seventh Air Force

And we didn't fly 2,000 miles to kill fish!

—Maj Gen Willis H. Hale

Hawaiian Air Force

The Hawaiian Air Force, activated on 1 November 1940, was the direct predecessor of the Seventh Air Force.¹ It was also the first command of the US Army Air Corps (later redesignated AAF) to see combat in World War II, when Japanese carrier planes bombed and strafed Hickam and Wheeler Fields and Pearl Harbor on 7 December 1941.²

The tremendous naval loss from the attack at Pearl Harbor is well known—10 ships sunk or put out of commission (including five battleships) and eight other ships damaged.³ Less well known is that the AAF lost more than 100 planes, about one-half of the entire Hawaiian Air Force, and the Navy lost 80 planes as well.⁴ The only compensation to these losses was that approximately 35 Hawaiian Air Force planes of all types managed to get airborne, and in the combat that followed they shot down 10 enemy planes, against four AAF planes downed.⁵

After the attack on Pearl Harbor, what was left of the Hawaiian Air Force was put on constant alert against another Japanese attack, while its bomber and fighter groups were reequipped and brought back up to strength.⁶ The Hawaiian Air Force also underwent reorganization, starting with the appointment of a new commander, Brig Gen Clarence L. Tinker, on 18 December 1941 (promoted to major general early January 1942).⁷ On 1 January 1942, then Brig Gen Willis H. Hale, who had been serving under General Tinker as Third Air Force Chief of Staff at MacDill Air Force Base (AFB), Florida, when Pearl Harbor was attacked, was brought to Hawaii to assume command of VII Bomber Command.⁸

Interestingly that same day, 1 January 1942, VII Bomber Command flew its first offensive mission for the Hawaiian Air Force. A solo B-17 staged through Midway Island, refueled, then flew over Wake Island (which had fallen to the Japanese the week before), took photos, and returned to Oahu via Midway Island—a more than 4,000-mile mission that left the plane with only 15 minutes of fuel upon return.⁹ That mission was prescient indeed in terms of the offensive spirit, and the nature of the combat into which General Hale would soon lead the Seventh Air Force.

Establishment of Seventh Air Force

The Hawaiian Air Force was redesignated as the Seventh Air Force on 5 February 1942, under the command of General Tinker.¹⁰ The primary commands comprising the Seventh Air Force at that time were the VII Fighter Command (commander, Brig Gen Howard C. Davidson), VII Bomber Command (commander, General Hale), and VII Air Force Service Command (commander, Brig Gen Walter J. Reed).¹¹

Early Operations

The new command began with the same basic mission as its predecessor—defense of the Hawaiian Islands.¹² General Hale best describes those early days:

After the first shock of the Jap attack, the immediate reaction was to throw everything into the defense of Hawaii. Ground defenses dug in. Our fighters and bombers were marshaled for air defense. The islands being situated as they are, the pattern of defense as far as aircraft was concerned consisted principally of search missions with our alert forces always prepared to strike. Daily missions were flown covering the area around the islands for a radius of more than 800 miles. This meant flights of more than 1,800 miles, because a plane does not fly straight out and straight back; it flies a zigzag pattern in its search sector.

Our search missions stressed the obvious value of training the men in overwater flights, with the direct result that the navigator became the key man of a bomber crew. The navigator's training as well as the pilot's was stepped up. We realized, however, that these search missions did not provide complete training. For that reason we started making round-trip flights to Johnston Island, a typical small coral atoll some 714 nautical miles southwest of Oahu. There are no other landmarks around Johnston. You either hit it or you don't, and the results were very tangible. In order that the men would get complete training, we sent them down in the daytime and had them fly back at night. Thus we trained our over-water flyers the practical way.¹³

In addition to this "practical" approach of marrying training to real-world missions, joint Army-Navy-Marine exercises were also implemented in January 1942 in order to improve the coordination of all arms for the defense of Oahu.¹⁴ In these exercises, VII Bomber Command bombers—escorted by Navy and Marine fighters—would "attack" Hawaii, while VII Fighter Command fighters would try to break up the attack and defend the islands.¹⁵ Additional training exercises focused on interception, escort, attack, gunnery, bombing, rocket firing, and support of ground troops.¹⁶ These skills and joint coordination capabilities would become increasingly crucial starting in the fall of 1943 when these units would begin participating in the island-hopping campaign through the Central Pacific.

Unfortunately, the Seventh Air Force was seldom the beneficiary of its own excellent training programs during the early years. For aside from the low priority suffered by all Pacific forces due to the "Europe First" policy, the Seventh Air Force largely served as a replacement pool for the Fifth and Thirteenth Air Forces.¹⁷ For example, between the summer of 1942 and the fall of 1943, the VII Bomber Command never had more than one

group of heavy bombers on hand; and these groups either were inexperienced and being trained for service somewhere else, or battle-worn outfits sorely in need of rest.¹⁸ Likewise, during the same period 7th Fighter Command supplied Thirteenth Air Force with two full fighter squadrons and a group headquarters, in addition to supplying trained fighter pilots to Thirteenth and Fifth Air Forces at a rate of 25 per month.¹⁹ Overall, high personnel turnover coupled with chronic shortages in equipment and supplies tried the patience of the Seventh Air Force commanders, and the monotonous job of the Seventh Air Force in the early days was discouraging to say the least.²⁰

Battle of Midway

When naval intelligence learned the Japanese were preparing to strike at Midway, the Seventh Air Force sent 15 B-17 Flying Fortresses and four B-26 Marauders forward to Midway on 30 May 1942 to help the Navy repulse the enemy fleet.²¹ The B-17s began flying long overwater searches for the enemy fleet with Navy PBYs on 31 May 1942, and the actual Battle of Midway began on 3 June 1942.²²

The Office of Information Services—in its Brief History of Seventh Air Force, 1940–45—stated that in the course of the three-day battle (3–6 June 1942) the Seventh Air Force “scored 22 direct hits and six probables” on Japanese ships.²³ However, this turned out not to be the case. It is interesting to compare the specific claims made by Seventh Air Force in a 13 June 1942 letter to Gen Henry H. “Hap” Arnold, and the actual results cited by Kenn C. Rust in his book *Seventh Air Force Story . . . in World War II*.²⁴ In his 13 June 1942 letter, Maj Gen Howard C. Davidson (acting Seventh Air Force commander on that date) stated that in action on 3 June 1942, nine B-17s scored five hits, one probable hit, and four near misses—leaving two enemy vessels aflame.²⁵ Rust points out, however, that only nine of the 36 bombs released fell near the enemy transport ships, and no hits were made.²⁶

Likewise, in outlining the action on 4 June 1942, General Davidson detailed the results of several flights of B-17s, highlighting no fewer than a dozen hits and an enemy destroyer sunk.²⁷ Additionally, he recounted a mission of four B-26s, armed with 2,000-pound torpedoes, scoring two hits but at a loss of two B-26s.²⁸ Again, Rust points out that while this B-26 mission was the first torpedo attack by AAF planes in history and the combat was harrowing indeed, no hits were scored, and two B-26s were lost.²⁹ Similarly, Rust points out that the best the B-17s were able to do on 4 June 1942 was put six bombs within 100 yards astern and five bombs within 200 yards to starboard of the enemy carrier *Soryu*.³⁰ Finally, Rust states the final B-17 mission on 6 June 1942 claimed the sinking of a Japanese destroyer that turned out to be a US submarine, which fortunately dived quickly and was not hit.³¹ General Davidson’s letter of 13 June 1942 admitted the mistaken attack on the friendly submarine.³² Overall, General Davidson claimed 22 direct hits in his 13 June 1942 letter,

against losses of two B-17s and two B-26s.³³ However, Rust states that the lack of any hits obtained demonstrates the extreme difficulty of heavy bombers hitting maneuvering ships at sea.³⁴ On the other hand, Rust argues that the Seventh Air Force made a significant contribution to the Battle of Midway, by wearing down the enemy defenses so that Navy dive-bombers could finish off the four virtually undefended Japanese carriers.³⁵

The exaggerated press reports ensued because the AAF bombers were the first to return to Hawaii from the Battle of Midway, and frankly, they took the credit.³⁶ On 12 June 1942, one day before the naval task forces returned to Pearl Harbor, the *New York Times* published an article with the headline: "Army Fliers Blasted Two Fleets off Midway."³⁷ The problem, it seems, was that Army aviators were not trained in assessing battle damage at sea; and at the height they were flying, it was impossible accurately to determine ship types or to tell a hit from a near miss.³⁸

While censorship rules of the time may have played a role in the Navy not publicly disputing AAF claims, E. B. Potter points out that Adm Chester W. Nimitz "recognizing that the aviators made up in gallantry what they lacked in aim and damage-assessment, declined to contradict the Army's extravagant pretensions."³⁹ Even after the battle had been carefully analyzed and it was clear they had not scored so much as a hit, Nimitz still declined to dispute the aviators, releasing instead a statement through his spokesman that Midway "was truly a victory of the United States' armed forces and not of the Navy alone."⁴⁰

However, this apparent graciousness can also be seen as a "kill them with kindness" strategy, and the Navy was not the only one employing it. In an undated message to General Arnold, Gen George C. Marshall highlights a naval flyer who while lauding the work of carrier-based aircraft in a press interview, also reiterated that "not one major ship in this war has been sunk by horizontal bombing."⁴¹ General Marshall's guidance to General Arnold is strikingly similar to the tack taken by Nimitz: "War Dept policy has been to make no repeat no comment publicly and not repeat not to mention the matter to Navy officials on the grounds that the indiscretion is so gross that the initial moves for correction should come from the Navy. This is your confidential information to warn you against comments and to have you suppress possible comments by your people. Indiscretions of this nature will only do harm at this moment and will weaken our position whereas I believe that good will come out of the matter because of the highly embarrassing position in which the Navy Department has been placed."⁴² While it appears both these men were genuinely acting with gracious civility, it is clear that regardless of motivations, the services did not want to air interservice disputes in the public arena.

Unfortunately, Vice Adm Raymond A. Spruance (who would soon be in Seventh Air Force's direct operational chain of command) was not as understanding as Admiral Nimitz, and he never forgave the AAF for its exaggerated claims at the Battle of Midway.⁴³ General Hale's (soon to be commander of

the Seventh Air Force) receipt of the Distinguished Service Medal for his bombing missions at Midway probably aggravated this tension, and Admiral Spruance's attitude did nothing to help the already difficult inter-service relationship between General Hale and his (soon to be) immediate operational boss, Vice Adm John H. Hoover.⁴⁴

Additionally, the success of the Navy dive-bombers versus the apparent lack of success of the AAF heavy bombers established a paradigm in some naval officers' minds (especially Admirals Spruance and Hoover) of what effective bombing should look like—that is, lower equals better.⁴⁵ This paradigm is at the heart of what appears to be a fundamental misunderstanding and/or lack of appreciation on the part of these naval officers for the nature of combat of land-based heavy bombers in the Central Pacific.

On the last day of the Battle of Midway—6 June 1942—the commander of the Seventh Air Force, General Tinker, led four LB-30 bombers on a night mission against Wake Island, hoping to catch some of the retiring Japanese fleet there.⁴⁶ General Tinker's plane became lost, crashed into the ocean, and no trace was ever found of the plane or the crew.⁴⁷ General Davidson served as the interim commander of Seventh Air Force until General Hale assumed command of the Seventh Air Force on 20 June 1942.⁴⁸

Maj Gen Willis H. Hale

General Hale was born on 7 January 1893 in Pittsburg, Kansas, where he attended public schools and Kansas State College.⁴⁹ He left school in 1912 and became an instructor at Culver Military Academy and later at the New York Military Academy.⁵⁰

In 1913, as a third lieutenant in the Philippine Constabulary (composed of native troops and white officers), General Hale fought in the Oto campaign and at Panay Island against the outlaws—receiving the campaign ribbon.⁵¹ He was commissioned in the regular Army in 1917, serving with the 15th Infantry in China. Then, in 1918, he went to France with the American Expeditionary Force (AEF), serving as aide to his uncle, Maj Gen Harry C. Hale, commander of the 84th Division.⁵² With typical self-deprecation, General Hale reported that he “distinguished myself in World War I by not distinguishing myself.”⁵³

General Hale earned his wings from advanced flying training at Kelly Field, Texas, in December 1923 and was transferred to the Air Service in November 1924.⁵⁴ He graduated from the ACTS, Langley Field, Virginia, in June 1928; the Command and General Staff School, Fort Leavenworth, Kansas, in June 1934; and the Army War College, Washington, D.C., in June 1937.⁵⁵ Following a tour of duty at General Headquarters, Air Force, Washington D.C., he was serving as chief of staff, Third Air Force at MacDill Field, Florida, when the Japanese attacked Pearl Harbor.⁵⁶ On 1 January 1942, General Hale assumed command of VII Bomber Command, and on 20 June 1942 he took command of the Seventh Air Force.⁵⁷ General Hale was in heavy bombardment for virtually his entire time in the Air Corps, and so was one of the few senior officers who had grown up with

the AAF's strategic weapon.⁵⁸ He was a leader from the front, personally leading bombing missions during the Battle of Midway as commander, VII Bomber Command.⁵⁹

In April 1943, as commander, Seventh Air Force, he got the green light from Admiral Nimitz to lead the first bombing strikes against the valuable phosphate works on Nauru Island and the first mission against Tarawa.⁶⁰ These missions were combined into one, becoming one of the longest over-water missions in AAF history at the time—more than nine thousand miles flying from Hawaii staging through bases such as Funafuti. After the strike on Tarawa, with the Japanese already retaliating with strikes of their own against Funafuti, General Hale quickly led his bombers back to Hawaii, in what he described to General Arnold as “the longest and fastest retreat in military history”—it was more than 3,300 miles.⁶¹ General Hale subsequently received the Navy Cross for this action.⁶² Later, while he understood the subsequent order prohibiting senior officers from flying combat missions, he regretted that he could not lead missions.

General Hale had a tendency to toy with his tortoise shell glasses during conversations, but he was always quiet and attentive.⁶³ He rarely swore, almost never lost his temper, and his subordinates claimed that even during a dressing down his voice never rose above a conversational tone.⁶⁴ On the other hand, his staff noted that he could curl the paint off a Liberator with a whisper—earning him the moniker “whispering Willis.”⁶⁵

General Hale was extremely concerned about the morale of his men.⁶⁶ He insisted on a policy of returning flying personnel to the mainland after 30 combat missions in the heavy bombers—which in early 1944 gave the men about a 50–50 chance of survival.⁶⁷ He also insisted on presenting decorations to his men as soon as they were awarded—a policy only recently restored in today's Air Force, referred to as “pin ‘em where you win ‘em.”⁶⁸ Additionally, he instituted a two-week rest schedule for his forward deployed bomber crews after 15 missions and allowed the entire crew (officers and enlisted) to rest and relax together—increasing the teamwork and camaraderie of his crews.⁶⁹

General Hale smoked incessantly, had a poor memory for names, had no known superstitions and, like all Air Corps officers, had a psychopathic hatred of paperwork.⁷⁰ General Hale was fond of the young men in his command, and when he could choose he almost always was found in their company.⁷¹ He rarely sought the association of older officers, but found his ability to canvas his far-flung command curtailed by the almost daily conferences needed to coordinate the joint operations of the Central Pacific.⁷²

In general, while one forms an impression of General Hale as a man who was quiet and unassuming, one can also see in General Hale a man who was uncompromising on issues about which he held deep convictions. Having grown-up in bombers and having experienced firsthand the harrowing nature of combat in bombers in the Central Pacific, General Hale had strong convictions about the proper employment of “his” bombers. Not surprisingly,

he would be less than receptive to suggestions from his naval superiors that would place his crews in even more jeopardy than they already were.

Early C² Relationships

When the Hawaiian Air Force was activated in 1940, its operational chain of command was straightforward—it received its operational orders through Lt Gen Delos C. Emmons (US Army), commanding general of the Hawaiian Department.⁷³ However, when Admiral Nimitz was designated as commander in chief, Pacific Ocean Area (CINCPOA) on 30 March 1942, the Navy exercised operational control (OPCON) of Seventh Air Force under the concept of unified command of the Pacific.⁷⁴ While this seems as similarly straightforward as the command relationship enjoyed by the Hawaiian Air Force, in reality it was far more complex; and the C² relationship between Seventh Air Force and the Navy continually evolved throughout the war.

The early years of the Seventh Air Force (1942 through summer 1943) serve as a good example of the complexity of C² relationships in the Central Pacific. During this period, General Hale, as commander of the Seventh Air Force, served as air officer on General Emmons's Hawaiian Department staff, and in all administrative, supply, and services matters the Seventh Air Force was a subordinate echelon of the Hawaiian Department.⁷⁵ Similarly, VII Fighter Command, with its primary mission at that time of defense of the Hawaiian Islands, fell under the Hawaiian Department for operational C².⁷⁶ However, VII Bomber Command fell under the direct and complete OPCON of the Navy, through the Navy's Patrol Wing 2 (Patwing 2).⁷⁷

In order to simplify matters, this study focuses on the operational C² relationships of the Seventh Air Force; and figures 1–6 provide notional graphic depictions of the various operational C² stages of the Seventh Air Force from 1940 to 1945. Figure 1 shows the straightforward operational command relationship enjoyed by the Hawaiian Air Force in 1940 and 1941. Figure 2 displays the split operational C² of VII Fighter Command and VII Bomber Command between the Navy and the Army from 1942 to mid-1943 when plans for the launching of the island-hopping campaign would drive the forging of new operational command relationships.

Figures 3, 4, and 5, depict the operational C² schemes for Seventh Air Force during the three major island-hopping campaigns through the Gilberts, the Marshalls, and the Marianas. The evolution of operational C² during this period lies at the heart of this study, as this is when General Hale was most closely associated with the forces of the Seventh Air Force—either as commander of Seventh Air Force or as COMAIRFORWARD. During this timeframe, General Hale agitated for and eventually gained full OPCON of all shore-based air assets. Ironically, it was only after General Hale relinquished command of the Seventh Air Force that he was able to gain full OPCON of all Seventh Air Force assets—in addition to Navy and Marine shore-based assets.⁷⁸

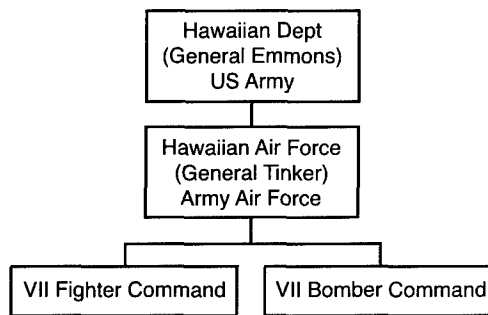


Figure 1. Operational Control, Hawaiian Air Force, Mid-1940 and 1941

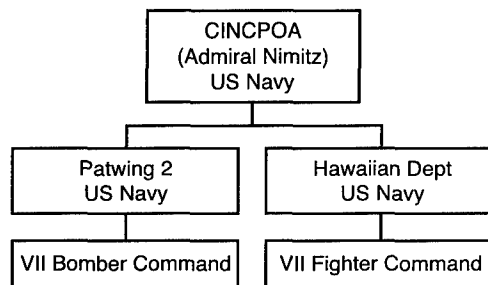


Figure 2. Operational Control, Seventh Air Force, 1942 through Summer 1943

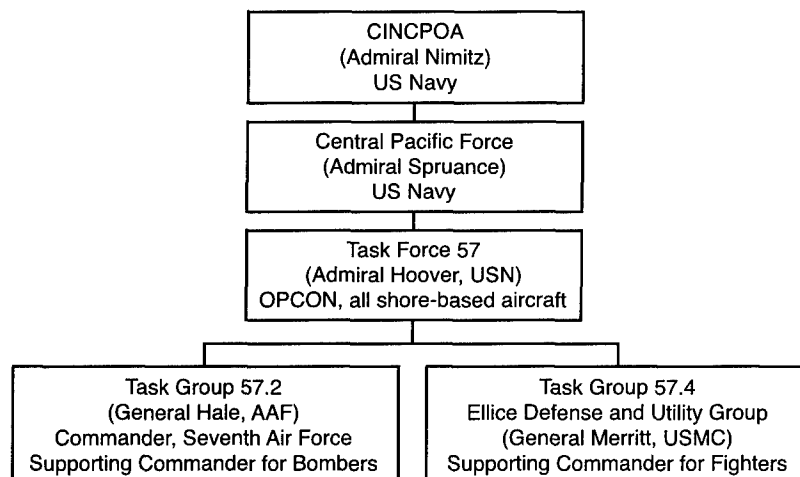


Figure 3. Operational Control, Seventh Air Force, the Gilberts, Fall 1943

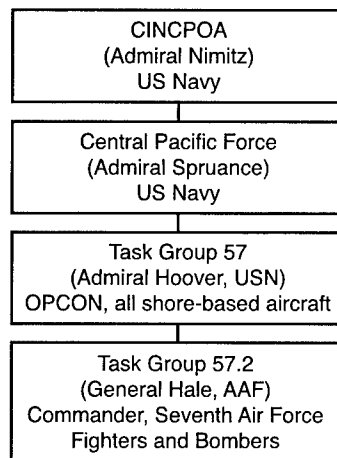


Figure 4. Operational Control, Seventh Air Force, the Marshalls, Early 1944

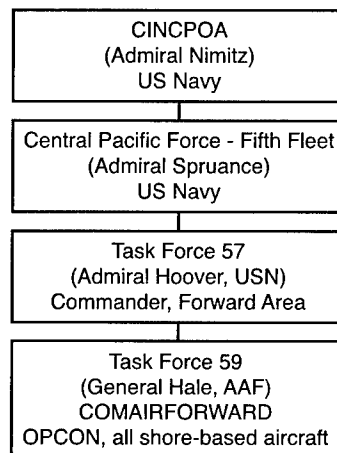


Figure 5. Operational Control, Seventh Air Force, the Marianas, Summer 1944

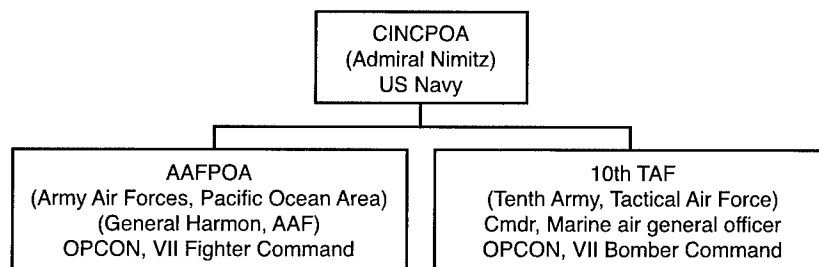


Figure 6. Operational Control, Seventh Air Force, Okinawa, Spring 1945

Figure 6 represents the operational C² relationships during the last major campaign of World War II—the battle for Okinawa. By the spring of 1945, the ranks and assets of the Seventh Air Force had swelled beyond anything reminiscent of the old moniker the Seventh Air Force had earned during the island-hopping campaign—Hale's Handful. So much so, in fact, that a Tactical Air Force, commanded by a Marine air general was established on Okinawa, operationally controlling VII Bomber Command, as well as Seventh Air Force's P-47N fighters.⁷⁹ The rest of VII Fighter Command was operationally controlled by Army Air Forces, Pacific Ocean Area (AAFPOA), which had been activated on 1 August 1944 under the command of Lt Gen Millard F. Harmon.⁸⁰ General Hale's Task Force 59 was disbanded on 6 December 1944, whereupon General Hale served as the deputy commander for Operations, AAFPOA through the end of the war.⁸¹

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Chapter 3

Early Campaigns: The Gilberts and the Marshalls

Just one damned island after another!

—Pilots and Ground Crews of the Seventh Air Force

Introduction

The summer of 1943 marks the transition of Seventh Air Force from a defensive and training-oriented command to an offensive, highly mobile combat command.¹ While training and service support to other commands would continue, as well as Fighter Command's charge to provide for air defense, Seventh Air Forces' energies became increasingly devoted to support of its own offensive operations in the Central Pacific.² In July 1943 Seventh Air Force received its first major combat assignment when the Joint Chiefs of Staff (JCS) issued orders for Operation Galvanic—a joint amphibious assault against the Gilbert Islands, marking the beginning of a drive through the Central Pacific by Army, Navy, Marine, and Air Force.³ General Hale best describes the significance to his command: "July 1943 marked the end of the defensive phase of our operations. Plans for the Central Pacific offensive were revealed to us. No longer would we fly from static defense positions in Hawaii, with occasional raids from our scattered bases. We prepared to take our bombers to bases hundreds and even thousands of miles away where we would close with the enemy and drive him back."⁴

Units of VII Bomber Command would continue to face all the challenges they coped with when previously deployed to the South West Pacific Area (SWPA) during the Solomons' campaign—and more: extreme distances, no escorts, the need for pinpoint accuracy, joint C², and logistical nightmares. While creativity and technological advancements overcame some of these challenges, often it was just pure grit and determination that got the job done.

Units of VII Fighter Command would deploy to forward staging bases to provide air defense, then would embark on a wide variety of missions—often joint—in preparation for and execution of the amphibious assaults that were the hallmark of the island-hopping campaigns across the Central Pacific. The challenges they met were also extraordinary, and the solutions they devised were likewise often highly innovative. However, just as often, the price for solutions was paid for in blood—especially in the development of joint CAS procedures and doctrine.

This chapter highlights the major obstacles and challenges met and overcame by the Seventh Air Force during the campaigns for the Gilbert and Marshall Islands—focusing on planning and preparations, bomber operations, and development of CAS.

Campaign for the Gilbert Islands—Operation Galvanic

Planning for the offensive in the Central Pacific had always envisioned occupying the Marshall Islands in preparation for subsequent operations against positions in the Carolines such as Ponape and Truk.⁵ However, closer study argued for occupation of the Gilbert Islands prior to operations in the Marshall Islands for several reasons. First, the Gilberts had enemy airstrips at Tarawa, Makin, and Apamama, which were easily reinforced from their main base at Truk in the Caroline Islands, and so represented a threat to operations in the Marshalls. Second, taking the Gilberts would enable sustained reconnaissance and bombing operations against the Marshalls that American bases at Funafuti and Canton were too far away to support. Additionally, seizing the Gilberts first would allow US forces to advance along an established line of communications joining the Central and South Pacific and would allow Admiral Nimitz's forces to test amphibious methods or equipment against less centrally defended islands than in the Marshalls. Third, occupying the Gilberts would mean acquiring atolls with airfields already built on them and would effectively widen the Solomons' front so that surface forces could be used in either or both areas.⁶

Final plans for Operation Galvanic in the Gilberts required seizure of Tarawa, Makin, and Apamama by amphibious forces. Tarawa atoll (composed of several islands on a reef 22 miles long) was the most important and best-defended objective, having become the main Japanese air base in the Gilberts.⁷ Makin and Tarawa atolls were assaulted simultaneously on 20 November 1943, and the assault on Apamama began on 26 November 1943.⁸

To accomplish Operation Galvanic, Admiral Nimitz created the Central Pacific Force, United States Pacific Fleet, commanded by Admiral Spruance, consisting of a fast carrier force, a joint expeditionary force (for landings), and a force for OPCON of shore-based aircraft and the bases from which they operated.⁹ All shore-based aircraft came under OPCON of Task Force 57 commanded by Admiral Hoover. General Hale's Seventh Air Force provided Admiral Hoover with bombers and fighters. The bombers were organized as a strike group (Task Group 57.2) under General Hale's command, while the fighters became part of the Ellice Defense and Utility Group (Task Group 57.4), commanded by Brig Gen L. G. Merritt, US Marine Corps (USMC).¹⁰

Seven squadrons of bombers and three squadrons of fighters of the Seventh Air Force supported Operation Galvanic from five islands—Canton,

Funafuti, Nukufetau, Nanomea, and Baker. Of these, only Canton and Funafuti had been developed prior to the fall of 1943.¹¹ The Seabees and aviation engineers worked hard to hew airstrips out of the dense covering of coconut palms on the other three islands prior to D day; and in September, 19 P-40Ns of the Seventh Air Force flew from Canton to Baker to provide local protection for the engineers.¹²

However, despite herculean efforts in readying these fields for use in Operation Galvanic, the challenges in providing service and maintenance on islands up to two thousand miles from the Hawaiian Air Depot were equally prodigious. Since ground crews would accompany the flight personnel of their bomber and fighter squadrons, squadrons could provide their own first- and second-level maintenance; but third- and fourth-level maintenance in the forward area were too much to expect. In fact, the only thing approaching standard maintenance facilities could be found at Canton, where a sub-depot and an air base squadron were located after July 1943.¹³

Accordingly, to meet the need on overcrowded, small islands in the forward area, Seventh Air Force Service Command developed a new concept—lean, compact mobile units called Air Service Support Squadrons (ASSRONS).¹⁴ These stripped down units—aside from being thinly manned—were also required to provide a variety of services, with duties to include “repair, supply, evacuation, sanitation, construction, transportation, traffic control, salvage, graves registration, burials, quartering, training of service units, estimation and supervision of funds, and other activities as may be required.”¹⁵ In reality, the duties of the ASSRONS were even broader. In both the Gilberts and the Marshalls—when occupying bases captured from the enemy—they acted as infantry during emergencies, formed burial teams for the disposition of enemy dead, and supplied the bulk of the stevedore labor for unloading on the beaches. Additionally, they supplied details that cleared away debris and undergrowth from areas to be occupied and helped in constructing buildings and airfields.¹⁶

The ASSRON was a short-lived phenomenon born in part from the need to find a way to operate with the chronic personnel shortages suffered by the Seventh Air Force during the early years of the war in the Pacific. Before the end of the campaign for the Marshall Islands, the ASSRON concept was abandoned in favor of standard service groups.¹⁷ During their short life ASSRONS took a lot of criticism, some of it justified. One problem stemmed from commanders using deployment to the ASSRONS as an opportunity to get rid of their undesirable troops—one ASSRON unit had 14 out of 32 men who had court-martial records.¹⁸ Another problem stemmed from the unconventional nature and hasty formation of the ASSRONS themselves—leading to inefficient performance from untrained troops performing unprecedented tasks. However, there is ample evidence that these creative outfits performed credibly, with later ASSRONS benefiting from the experiences of those that preceded them.¹⁹

Bomber Operations in Support of Operation Galvanic

A joint bomber strike against Tarawa was launched in September 1943 in an attempt to neutralize the airfield there, thereby preventing interference to the engineers building the airfields on the three Ellice Islands (Nukufetau, Nanomea, and Baker). Rear Adm Charles A. Pownall, commander of Task Force 15, was supplied a squadron of Seventh Air Force B-24s, while Brig Gen Truman H. Landon of the Seventh Air Force operating out of Canton had six Navy PBVs in addition to his B-24s. Additionally, Brig Gen Harold D. Campbell, USMC, of the Funafuti Air Group boasted B-24s, PBVs, and PV-1s for the raid.²⁰ In an effort to immobilize the airstrip for the carriers, B-24s were launched on the night of 18 September 1943 and bombed the airfield on Tarawa. The carriers' airpower worked over Tarawa on the morning of the 19th, followed by additional B-24s for a final reconnaissance and bombing run. The Japanese answered with anti-aircraft fire and sent up 15 to 20 Zekes to intercept the bombers, shooting down one B-24 and damaging 10 others. While the photographs provided much needed intelligence, they also showed that Tarawa had not been knocked out, not even temporarily—ominous tidings indeed for the upcoming assault.²¹

Sustained bombing operations by B-24s and Navy planes in preparation for Operation Galvanic began on 13 November 1943 (D minus 7).²² On that day, 18 B-24s of the 11th Group took off from Funafuti and dropped 126 x 20-pound (lb) fragmentation clusters and 55 x 500 lb general purpose (GP) bombs from 8,500 and 15,000 feet (ft), respectively—returning crews could see the fires burning up to 60 miles away.²³ Strikes of similar force by B-24s were launched against Tarawa on D minus 6, D minus 3, and D minus 1. Both Tarawa and Makin got even heavier pounding from D minus 4 through D minus 1 from carrier planes.

However, for Seventh Air Force planes, enemy bases in the Marshalls that could interfere with Operation Galvanic also required considerable attention. In the Marshalls, the major enemy air threats to cope with were from Kwajalein Island, Jaluit, Mille, and Maloelap. Therefore, B-24s struck Mille and Tarawa on D minus 6 (14 November 1943), Jaluit and Mille on the 15th, Kwajalein and Maloelap on the 16th, and Tarawa and Mille again on the 17th and 18th. Understandably, on the 19th (D minus 1), Seventh Air Force B-24s, Navy planes, and carrier gunfire pounded the primary assault targets, Tarawa and Makin.²⁴

During the raids on the Marshall Islands, while the overall enemy response was relatively ineffective, each of the attacks met with anti-aircraft fire of varying intensity and accuracy; and at Jaluit, Kwajalein, and Maloelap Japanese fighters came up to intercept the bombers.²⁵ Additionally, the enemy struck back with raids against Nanomea on the night of 11 November and against Funafuti on 13 and 17 November.²⁶

By the time the Marines went ashore on Tarawa on 20 November 1943, the Seventh Air Force heavy bombers had flown 141 sorties, dropping

116.5 tons of GP bombs and 5,634 20 lb fragmentation bombs directed primarily against Japanese fortifications.²⁷ While conducting these raids, aerial engagements resulted in the destruction of five enemy planes, with five others probably destroyed, and two more damaged.²⁸ Five B-24s had been lost on missions, with two more destroyed on the ground by the Japanese; and personnel losses totaled six dead, 19 wounded, and 11 missing.²⁹

Despite these efforts, after days of bitter fighting that cost 3,301 casualties, the Marines had reason to believe that the preinvasion bombardment of Tarawa had been woefully lacking. One possible reason could be that too much emphasis had been placed on surface bombardment—more than 80 percent of the fire on Tarawa's defenses had been from naval guns, with only 10 percent each coming from the B-24s and carrier aircraft.³⁰ As the Japanese positions on Tarawa were well dug in, the flatter trajectory of the naval guns were probably less effective in destroying bunkers and fortifications than bombardment from aircraft.³¹ Another possible problem may have been the allocation of the B-24s themselves. Since there were not enough B-24s to neutralize all the surrounding enemy bases in the Marshalls, perhaps it would have been better to concentrate the B-24s on Tarawa and rely on the carriers to protect the assault forces.³² However, this option was not acceptable in a Navy-centric theater where there was considerable concern about the safety of the carriers from outlying enemy bases. Regardless, the ineffectiveness of the preinvasion bombardment was not the only problem with the operations in the Gilberts.

Development of CAS in the Gilberts

When the United States entered the war in 1941, none of the services had any serious experience in close support of ground troops; and CAS had the lowest priority of all air operations.³³ However, this would change, and close support missions would become a major task in Pacific amphibious operations, and the lessons learned along the way would be paid for in blood.³⁴

Military operations in the Central Pacific differed greatly from those in the South or SWPA, especially in regard to the distances between bases and objectives and the nature of the objectives themselves.³⁵ The great distances involved in the Central Pacific operations usually meant that close support during the assault phase would come from the carriers, with land-based air support to follow once an airstrip had been captured.³⁶ This contrasted with operations in the Southwest Pacific where bases were usually close enough to amphibious objectives to use land-based air support throughout the duration of the operation. Additionally, whereas planners for Southwest Pacific operations could usually find an undefended beach to land on, the smaller size of the islands and atolls in the Central Pacific meant that the Japanese could maintain defensive garrisons practically everywhere, so that landings usually met with stiff resistance.³⁷

This meant that CAS in the Central Pacific was far more critical to the success of amphibious operations than in the Southwest Pacific, and lack of effectiveness immediately translated to lost American lives.

Understandably, CAS in the Central Pacific developed quite independently from its evolution in the Southwest Pacific; and eventually CAS procedures in the Southwest Pacific came to parallel those developed in the Central Pacific, with a few differences.³⁸ However, prior to launching the Central Pacific drive, the only CAS procedures available as models were those gained from the amphibious experiences at Guadalcanal and New Georgia in the South Pacific and at Attu in the Aleutian Islands.³⁹ Since the landings on Guadalcanal were unopposed and the New Georgia landing was supported by land-based air, there was little in these operations to offer to early operations in the Central Pacific. However, while the operation at Attu was also largely supported by land-based air, an aircraft carrier participated—and a naval system of control was explored that looked feasible.⁴⁰

CAS Procedures at Attu

The critical elements of the control process—the commander support aircraft (CSA), the air controller, and air liaison parties (ALP)—were all developed during the Attu operation and would be integral to the CAS process throughout the Central Pacific drive.⁴¹

At Attu the commander of the naval task force (CTF 51) controlled all air support until command passed to the land commander ashore.⁴² Control was exercised through a Navy CSA on board the battleship USS *Pennsylvania*, an AAF air coordinator (AC) airborne over the island, a Marine assistant CSA on board the carrier USS *Nassau*, and ALPs (one naval officer, one AAF officer, and two enlisted AAF men) serving with the landing force commander and each battalion ashore.⁴³ Only one radio circuit was used to support communications between these parties, although two very high frequencies (VHF) and two high frequencies (HF) were available on this circuit.⁴⁴ However, the bottom line was that only one circuit was available to support air requests, air direction, and intelligence transmission.⁴⁵

In the event, poor weather, lack of available circuits, and complicated panel marking procedures, among other problems, resulted in poor quality CAS at Attu.⁴⁶ These problems, whether undigested or unheeded, would contribute to the coming debacle at Tarawa in the Gilberts.

CAS Procedures in the Gilberts

The first step of Operation Galvanic was the capture of two small, flat, coral atolls in the Gilbert Islands group—Makin and Tarawa. Since these atolls were more than 100 miles apart, the assaults on these atolls were considered separate; and naval forces, including the carriers, were divided.⁴⁷

The plan for the system of control was similar to that used at Attu in the Aleutians and highly “joint.” One CSA for the whole operation was

appointed (an AAF officer, Col William O. Eareckson), who operated from the battleship *Pennsylvania*, off Makin. Two additional CSAs (North and South) were appointed under Colonel Eareckson, one on the *Pennsylvania*, off Makin, and one on the USS *Maryland*, off Tarawa. Two ACs were to be airborne over each atoll, and ALPs were assigned to each landing force with enlisted assistants (Marine Corps communications personnel).⁴⁸

As at Attu, one radio net with alternating frequencies was dedicated to the operation but with two widely separated atolls and more than 18 stations on the net, this was a recipe for failure at critical moments. Additionally, the time-honored naval tradition of using a battleship as the C² ship was followed, serving not just as the hub of communications for CAS but for the entire operation—and neither battleship was adequately equipped for such operations. Worse, the battleships were, of necessity, also a part of the bombardment force; and with every salvo fired from the obsolete *Maryland* at Tarawa, the concussion knocked communications out for minutes at a time.⁴⁹

The plan for the morning of the landings (20 November 1943) called for all torpedo bombers, any fighters not needed for combat air patrol (CAP), and as many dive bombers as possible to attack the atolls (antiaircraft guns, buildings, etc.) for 30 minutes prior to the final naval bombardment. Then, after the final naval bombardment, fighter planes were to strafe the beaches, gradually moving inland, and ceasing when the first boat touched shore. After troops were ashore, all relieved fighters were to report to the CSA for strafing missions prior to returning to their carriers. Generally, the CSA would release control of the flight to the ALP ashore if the ALP was able to direct the strike.⁵⁰

During the landings, air operations at lightly defended Makin were conducted basically as planned, while air operations at heavily defended Tarawa were not. Communications at Tarawa were so frequently interrupted both ashore and afloat that when planes for the first air attack were 30 minutes late (for unknown reasons), the CSA did not even know about it. As a result, coordination for air and naval gunfire was hopelessly out of control from the very beginning. The worst results of the air operations were incidents of "friendly fire," from strafing our own Marines to bombing friendly tanks (the Japanese had no tanks on Makin). According to Dr. Joe G. Taylor—author of *Close Air Support in the War against Japan*, USAF Historical Study no. 86—these conditions arose from "poor communications, dependence upon panels to mark front lines, and sheer carelessness on the part of the pilots."⁵¹

Summary

It should be noted that criticisms of air support in Operation Galvanic were applicable to virtually every phase of operations in the Gilberts and delivered the following judgment: "Planning was poor; equipment was inadequate; naval gunfire and the preliminary air bombardment were insufficient and

poorly directed; and the communications trouble which plagued air support hampered all phases of the operation."⁵² One major lesson learned was that using a conventional battleship for a command post was an utter failure, and new C² ships were immediately made by outfitting transports with elaborate communications systems. These floating command posts were ready for the next drive through the Marshalls. Additionally, operations in the Gilberts highlighted the need for better CSA control of support aircraft, the need for strict radio discipline, and the need for enhanced coordination between air and naval gunfire so as to minimize "friendly fire" and to ensure planes were available when needed.⁵³

A subsequent report, written by Col Claudius H. M. Roberts after a trip through the Gilberts and Marshalls in 1944 to evaluate munitions for the US Army, reinforced some of these conclusions.⁵⁴ While Colonel Roberts points out that the quality of the concrete used by the Japanese in their pillboxes and shelters was poor, they were nonetheless prepared to resist strong attacks from the sea or air at Tarawa.⁵⁵ Therefore, one of his primary conclusions was that "adequate intensity and proper use of aerial, naval, and artillery bombardment must be made to destroy resistant targets, crater and demolish field fortifications, and clear foliage and undergrowth to open fields of fire and reduce enemy concealment."⁵⁶ If nothing else, this report served to indicate that there was considerable interest across all the services to ensure events at Tarawa were not repeated.

On the positive side of the ledger, the ALPs had performed quite well to the point where they were often the only means by which higher-level commanders could get good intelligence. Additionally, while the basic elements of the control system for close support—the CSA, the AC, and ALPs—could be made more effective, they did not need to be abolished in favor of redeveloping a CAS process from scratch.⁵⁷

Operation Galvanic had been a laboratory for amphibious operations—unfortunately, Tarawa made it a very bloody one. However, ultimately Tarawa was still an expeditious operation despite heavy casualties, while Makin was secured in one day with 186 casualties and operations at Apamama met no opposition at all.⁵⁸

Campaign for the Marshall Islands—Operations Flintlock and Catchpole

Operations in the Gilberts had always been considered as preliminary to a drive through the Marshall Islands, which would secure critical staging bases for either an assault against the great bastion of Truk (in the Carolines) or, as finally decided, to support a drive into the Mariana Islands.⁵⁹ Operation Flintlock, code name for the planned assault of Kwajalein and Majuro atolls, had a target date of 1 February 1944 set by the JCS. Operation Catchpole, code name for the subsequent assault of Eniwetok atoll, was planned to begin three months later.⁶⁰ The ease and

speed at which Operation Flintlock was executed allowed Operation Catchpole to be launched immediately afterward; and by 19 February 1944, Eniwetok (northwesternmost part of the Marshalls) was secure.⁶¹ However, while valuable lessons learned from the Gilberts surely contributed to easier assault operations in the Marshalls, the drive through the Marshalls would exact a high price from Seventh Air Forces' bombers and crews.

For the drive through the Marshalls, the Seventh Air Force remained part of Admiral Hoover's Task Force 57, which in turn remained part of Admiral Spruance's Central Pacific Force.⁶² General Hale continued to control the land-based strike force, but in the Marshalls he also controlled the fighters as part of that striking force as well.⁶³

While air operations from the Gilberts through the Marshalls continued nonstop in their intensity, the Seabees and Seventh Air Force aviation engineers were laboring intensely to prepare newly won bases in the Gilberts for use.⁶⁴ Development of airfields on Tarawa atoll took precedence, and just as soon as the fighting stopped the Seabees started to work on airfields on Betio and Buota Islands. When completed, Betio had one coral runway (6,450 ft by 300 ft), parking for 72 heavy bombers, hardstands for 100 fighters, and service facilities. When finished, Buota boasted two airfields, dispersal areas for 76 bombers, service facilities, and boundary lights and floodlights for night operations.⁶⁵ At Makin, Seventh Air Force engineers quickly completed work on an airstrip consisting of a seven thousand foot runway (with steel matting), dispersal ability for 78 fighters and 24 heavy bombers, and third-level maintenance facilities. Finally, while progress at Apamama was slower, its airfield eventually consisted of an eight thousand foot coral runway, dispersal for 72 heavy bombers, lighting for night operations, and limited-maintenance facilities.⁶⁶ Fighters and bombers of the Seventh Air Force were deployed forward into the Gilberts just as fast as these fields became available, while air operations continued. By the first week in January 1944, General Hale had moved his ADVON Seventh Air Force, along with the forward command elements of VII Bomber Command and VII Air Force Service Command (AFSC) from Funafuti to Tarawa in the Gilberts.⁶⁷

Life in the Forward Area

The men of the Seventh Air Force lived and worked in the Gilberts under primitive conditions.⁶⁸ First, in the aftermath of the brutal fighting and heavy bombardment, most of the islands were a mass of stripped and/or uprooted coconut palms, with smashed/burned-out blockhouses filled with the heaped-up corpses of rotting, stinking dead.⁶⁹ Further, in the aftermath of the assault on Tarawa, even after the Seventh Air Force planes had arrived and begun operations, the dugouts, despite the unbearable stench, still contained a few fierce, fighting Japanese who would charge or shoot at anyone happening nearby.⁷⁰

The men lived on seemingly everlasting field rations, with very little drinking water and no entertainment. Life quickly became monotonous on these tiny atolls.⁷¹ As one officer grimly noted, it was "flies in the day, mosquitoes at night, and dysentery all the time."⁷²

Bombing/Strike Operations in the Marshalls

Air operations in the Gilberts and Marshalls were continuous and steadily increased in both their intensity and their joint flavor. In addition to important targets in the Marshalls such as Mille, Jaluit, and Maloelap, Nauru, to the west of the Gilberts, constituted a threat to Seventh Air Forces' forward bases. This base consisted of an airstrip and the largest phosphate works in the Pacific. Therefore, one day after the landings on Tarawa, Navy PB4Ys and Seventh Air Force Liberators conducted joint daylight photo and bombing strikes on that island.⁷³

Throughout the rest of November and December of 1943, Seventh Air Force Liberators continued to pound Nauru, Mille, Jaluit, and Maloelap, both to protect operations in the Gilberts and to prepare for Operation Catchpole in the Marshalls.⁷⁴ As bases in the Gilberts were captured and prepared, squadrons of B-24s, B-25s, A-24s, P-39s, and P-40s were moved forward, resulting in increased air strength that could be brought to bear. The primary consequence of this buildup was that the heavy bombers would no longer shoulder the entire load for the ever-increasing list of targets.⁷⁵ For example, starting in December 1943, the neutralization of Mille and Jaluit—the closest of the Marshall Islands—was turned over to the A-24s (Dauntless dive-bombers), P-39s, and P-40s. Usually the A-24s would be escorted by AAF P-39s, P-40s, or Navy F6Fs.⁷⁶ Sometimes, Navy SBDs (the Navy version of the A-24 dive-bomber) would go with them. In addition to escorting the A-24s, the P-39s and P-40s flew a variety of missions: bombing, strafing, attacks on shipping, and combat patrol.⁷⁷ Overall, 367 bombing sorties were flown against Mille and Jaluit from 18 December 1943 and D day for the assault on Kwajalein atoll, 31 January 1944.⁷⁸ Additionally, the fighters flew continuous daylight combat patrols over Mille from D minus one through D plus one for Operation Catchpole.⁷⁹

Bomber Crisis—Tough Combat, Tough Decisions

Despite the increased air strength in the forward area, life did not get easier for either the heavy (B-24) or for the medium (B-25) bombers. First, for each new forward base established, new, ever-deeper targets would appear from over the horizon, such as Eniwetok (northernmost of the Marshalls) and Ponape (northwest of Nauru, near Truk). Accordingly, the majority of missions for the heavy bombers remained unescorted and at the very limits of their operational endurance. Second, after the amphibious warfare experts candidly analyzed their mistakes in the Gilberts, one of the major lessons learned was that preliminary bombing had not been

sufficiently intense nor of long enough duration. Therefore, preassault bombardment would now last for three days, instead of three hours as it had at Tarawa.⁸⁰ Accordingly, as the assault on Kwajalein (Majuro was expected to be taken with little opposition) neared, Hale's Handful, as the short-handed Seventh Air Force came to be called, launched a maximum effort at Kwajalein, Mille, Jaluit, Maillot, Wotje, and Nauru—maintaining virtual round-the-clock pounding of these bases.⁸¹ While these efforts were supplemented by decisive strikes by Vice Adm Marc A. Mitscher's carriers, it was the Liberators of the Seventh Air Force that carried the heaviest burden.⁸²

In a letter to General Arnold—chief of the Army Air Corps—of 29 December 1943, General Hale described at length some of the problems developing during the transition from the Gilbert to the Marshall operations:

From the time of our first mission on November 13th, preparatory to the Gilbert Islands assault, we have bombed Jap bases almost daily—33 days in a total of 47 days. And what missions! They have averaged 1,600 miles over nothing but water, and through every kind of weather except snow. Our bases are hastily constructed single strips on small atolls. Average gross loads over 62,000. Communications have been undependable and weather information almost useless. The Jap bases are matured, well developed and modern. At first my losses were negligible; now they are mounting rapidly. The Japs are heavily reinforcing the Marshalls on the ground and in the air. Their A/A has improved greatly. About 50 Zero's intercepted yesterday at Maloelap and shot down two B-24's. Their A/A did the same to two planes on the 26th and two more a few days before. Our distances are so great that the heavies never have any fighter cover. Some of my crews are beginning to crack, but I believe we can continue at our present rate for about one more month . . . 100 hours per month of combat flying is rather tough. In February I will probably slow down on the heavies and let the mediums take over the burden. They had their first mission yesterday. It was against Mille—500 foot ceiling, rain and A/A—they went in at 40 ft with 50s and 75s on full.

As compared to flying over Europe, the crews of disabled planes know their parachutes are useless, so into the ocean they go and we have failed to recover a single man. Islands are far apart and in enemy hands.

Notwithstanding these grueling flights, lousy living conditions, field rations, no amusement or recreation, no hope if disabled, no fighter cover, yet out they go, once every three or four days, their continued willingness and "guts" unshaken. I know of no other place in the world where our Air Force is fighting in facts of similar to those outlined above.

I am moving my headquarters to famous Tarawa tomorrow and will remain on that American-Jap graveyard at least until the conclusion of the Marshall Islands operations.

Happy New Year.⁸³

General Arnold's response of 19 January 1944 to General Hale, while understandably not offering solutions yet developed or manpower yet available (in keeping with the Germany first policy), does offer understanding and encouragement—it reads in part: "Willis, we are all aware of the problems you are being called upon to solve and you may be sure that

no effort will be spared to give you what you need to do the job . . . I know the Seventh Air Force will again distinguish itself in the coming show.”⁸⁴

However, the consistently intense opposition the heavy bombers met on raids over Maloelap prompted General Hale to accelerate his decision to shift the burden more to the B-25 Mitchells. From December 1943 to early January 1944, the Seventh Air Force Liberators had claimed 54 enemy planes destroyed, 61 probable, and 55 damaged in combat over Maloelap, with losses of 11 Liberators—enough for General Hale to switch his Liberators to night attacks effective 2 January 1944.⁸⁵

The medium bombers (B-25 Mitchells), for their part continued unescorted daylight strikes against Maloelap throughout December 1943 and January 1944—sometimes drawing as many as 50 enemy fighters up to intercept them.⁸⁶ During the Marshall campaign, the Mitchells specialized in low-level bombing, cannonading, and strafing of both shipping and shore installations.⁸⁷ These techniques gave them certain tactical advantages such as avoidance of radar, added precision in bombing, and the ability to strafe targets effectively with both machine guns and cannons.⁸⁸ On the other hand, these kinds of operations would also prove costly.⁸⁹

Combat in the Mitchells and Liberators during the Marshalls campaign was harrowing, and tales abound of heroism, ingenuity, and sometimes just uncanny good luck. Take the case of Lt Allen H. Cobb's Mitchell crew; members of the most exclusive service club, the Society of Tropical Drips, including only those airmen rescued from crashes in the drink.⁹⁰

Returning from Maloelap one afternoon, the Mitchell became a cripple, hence a straggler. With one engine gone, the fuselage and wings shot to ribbons, the Mitchell fought off thirty-nine enemy fighters for forty minutes, shooting down three for certain and five probably. In all that harrowing, uneven action, broken off only when both sides exhausted their ammunition, no crewmember was even hit. The nearest was when a machine-gun bullet creased the heel of a GI shoe worn by TSgt Oliver S. Koski, radio operator and waist gunner. Another burst took the seat out from under SSgt Fred Kirchoff, of San Antonio, Texas, without injuring the sergeant. Lt Bernard J. McKenna, the navigator risked his head in the astroglass—a small dome topside from which celestial observations are made—to call the attacks. While he called, he fingered his rosary beads. “We prayed her out of it, I guess,” said McKenna. “After we landed, every man told me he had been praying.” The battle used up the Mitchell's entire supply of ammunition, 3,700 rounds, without a single gun stoppage. Lieutenant Cobb, moreover, raced his one good engine twenty minutes, although the tech orders say it should have burned out in much less time than that.

Early in the running fight, two other Mitchell pilots, Lt James Blair and Lt Robert L. Cecil stayed behind, forming a tight formation with Cobb's ship. It would have been suicide for them to fly long at Cobb's reduced speed, so they were forced to cut and run, not, however without giving him valuable help. That was another example of the 7th's solidarity. When the Mitchell finally gave up, Cobb landed it on the sea. The life raft, which, almost miraculously, had not been hit, inflated perfectly. During the three hours before rescue by a Navy crash boat, fighters of the 7th took turns flying cover for the drifting crew.⁹¹

Then, there's the case of the *Texas Belle*, a B-24 that took a lot of lead over Maloelap:

The *Texas Belle*, commanded by Lt Charles F. Pratte, had just come through a ninety-mile running battle with thirty Zekes, which, by bad fortune, had intercepted the Liberators over their target. A cripple fell out of formation and the second flight, commanded by Capt Jess E. Stay, dropped behind to protect it. Pratte's ship drew most of the enemy fire. Two 20-mm. Shells pierced his right wing, a shell tore through the horizontal stabilizer without exploding, and thirty 7.7-mm. Bullets traced a dotted line along the fuselage. Happily, the Jap gave up about this time, having lost eight Zekes.

Pratte wished to land on the Tarawa strip, which had recently been occupied. Restored to use by the Seabees, the strip had not been enlarged sufficiently for heavy-bomber landings. Nevertheless, Pratte had no choice. He knew that, without brakes, he would overrun the strip into the piled coral and ocean that lay ahead. As he throttled down for landing, one engine cut out because of a bullet in the fuel line. Regaining flying speed, he again circled. Meanwhile, he had worked out a plan for diminishing his speed.

As the wheels touched the coral surface, Pratte had three parachutes flung into the breeze. One each was made fast to waist-gun mounts, the third to fuselage bracings in the tail. The chutes went out simultaneously, billowed and held, and the *Texas Belle* glided to a stop only a dozen feet short of the drink. The crew estimated that the landing speed had been cut by thirty to forty miles an hour.

The landing had a large audience; a Navy fighter being due to make the first landing on the Tarawa strip. Pratte inadvertently gained the honor. As far as is known, the *Texas Belle* is the first heavy plane in history to make a parachute landing. Gen H. H. Arnold, Chief of the AAF, certified the unusual nature of the feat when, in a letter to General Hale, he called it "unique, as far as I know, in operational history."⁹²

Then, there's the heroic endurance of Lt Malcolm Knickerbocker—General Hale tells it best:

Malcolm Knickerbocker, of Cincinnatus, New York, the copilot on a medium bomber, was badly shot apart by an explosive shell while over a target. The shell carried away his right leg at the hip socket. There was no way to apply a tourniquet. He administered morphine, and crew members used sulfa and plasma transfusions, but the flow of blood could not be stopped. The ship was more than 300 miles from its base, with no medical attention nearer at hand.

Knickerbocker remained at his post, giving all assistance. His smile was un-failing; periodically he lifted his hand in the international manual sign for O.K. for the benefit of his anguished comrades. Just as the bomber settled to earth, Knickerbocker's head slumped forward and he died. As the crew lifted his body from the plane, they sobbed.

When I heard the story, I too, broke down and shed a tear.⁹³

Between 28 December 1943 and 12 February 1944, a total of 17 B-25s were lost, in addition to suffering damage on 114 sorties. That was enough for General Hale to switch the B-25s to medium-altitude bombing attacks, greatly reducing the number of aircraft destroyed and damaged.⁹⁴

General Hale's decision to switch the heavies to night missions and raise the altitude of the Mitchell missions likely did not sit well with his Navy bosses (especially Admiral Spruance), although at least the decision on the Mitchells was made after D day for the assault on Kwajalein and

Majuro. On the one hand, the 3,000 plus Marine casualties of Tarawa were still fresh in everyone's mind, and even General Hale (in a 1944 newspaper interview) suggested that AAF sacrifices were the price that had to be paid for more successful amphibious operations in the Marshalls.⁹⁵ On the other hand, it is not unreasonable to infer from these decisions that General Hale reasoned effective results with fewer losses could be achieved with a more cautious approach—albeit, perhaps requiring more time to achieve them.

However, Admiral Spruance's vision of the lessons learned from Tarawa was that to seize islands with a minimum of casualties required "violent, overwhelming force, swiftly applied."⁹⁶ In his mind, there were two major impediments to achieving swift, overwhelming force—the US Army and the AAF.⁹⁷ First, the Army believed in slow, methodical advance after intensive artillery preparation, while protecting the flanks and keeping the line of advance intact. The Marines, to the contrary, believed in pushing ahead "h--l-for-leather," overrunning enemy positions, and mopping up later. The Marines felt that winning quickly brought fewer casualties than the Army tactics; and Admiral Spruance naturally sided with the Marines, especially since that meant reducing the time his ships had to stay on station to support the assault.⁹⁸

As noted earlier, the Navy was naturally concerned about limiting its carriers' time on station during these assaults since the longer they loitered, the more vulnerable they were to attack by Japanese submarines. The Army, understandably, was less concerned about the safety of the Navy carriers and more concerned about support for their assaulting troops. Clearly, these perspectives did not lend themselves to an understanding or appreciation of the nature of the combat between these two services.

As far as the AAF was concerned, Admiral Spruance never forgave the AAF for the inflated claims of the Battle of Midway, and his assessment of its performance in the Central Pacific only served to reinforce his prejudice.⁹⁹ Admiral Spruance—who adversely compared the straight and level, high-altitude bombing of the AAF to the Navy's dive-bombing tactics—concluded that the AAF's accuracy was as poor and its claims for success were exaggerated.¹⁰⁰

Moreover, while control of the bombers and fighters that supported Admiral Spruance's offensives ran through Admiral Hoover to General Hale, Admiral Hoover and General Hale did not get along personally, and they frequently disagreed on tactics and doctrine.¹⁰¹ Admiral Hoover pushed for lower-level bombing runs to achieve increased accuracy, but "Hale refused because his pilots were skittish about antiaircraft fire and wanted to fly above the range of enemy guns."¹⁰² General Hale wanted to mass his bomber formations, while Admiral Hoover believed this netted mediocre results.¹⁰³ In fact, after the Gilbert campaign, General Hale complained to Gen Robert C. Richardson Jr., commander of the Army forces in the Central Pacific, who in turn severely criticized Admiral Hoover's use of AAF forces in a letter to Admiral Nimitz.¹⁰⁴

While there will be more to say about the interplay between Admiral Hoover, General Hale, and General Richardson, no immediate action seems to have resulted from General Richardson's letter. Admiral Spruance's position was that he needed those AAF aircraft, in spite of their shortcomings; and while he could trust Admiral Hoover to be responsive to his orders, General Hale might not be.¹⁰⁵ The bottom line was, as long as Admiral Spruance had a "say" in it (and in a Navy-dominated theater, his say was considerable) an admiral (Hoover) would remain in control of AAF and, in turn, be accountable to him.¹⁰⁶

Tide Turns

The missions against Maloelap had been unescorted and tended to generate the strongest enemy fighter resistance. The pattern of the Japanese response was to wait until after the bombers had attacked and intercept them as they turned toward home, harassing them to a point they deemed to be beyond the range of Seventh Air Force fighters before turning back.¹⁰⁷ Then, on 26 January 1944, a combination of technology and innovation (the development of belly tanks for the P-40s) enabled the Seventh Air Force to spring a surprise on the enemy, causing their previously successful tactic to backfire.¹⁰⁸

After a flight of nine B-25s attacked Maloelap that day, approximately 24 enemy fighters intercepted them on their way home. This time, however, 12 belly tank equipped P-40s of the Seventh Air Force were waiting for them above the clouds at the point the enemy fighters would normally turn back to Maloelap. When the wave-hopping Mitchells arrived at that point, the P-40s dived down from 12,500 ft and sprang the trap. In three short minutes they broke the back of the Japanese fighters in the Marshalls by shooting down 10 enemy fighters, with another three probable.¹⁰⁹ While eight of the Mitchells were damaged, all made it home; and they accounted for another four enemy fighters destroyed.¹¹⁰ Two days later, when the B-25s attacked Maloelap again, only five enemy fighters came up to challenge them—they were the last enemy interceptors encountered in the Marshalls.

On 29 January 1944—in preparation for the upcoming amphibious assault on Kwajalein and Majuro—more than 700 aircraft from the 12 carriers of Task Force 58 dealt such a devastating blow to Kwajalein, Wotje, and Maloelap that there was not a single operational enemy aircraft remaining east of Eniwetok.¹¹¹ On 30 January 1944, the carrier planes and Seventh Air Force planes struck the Marshalls again at Kwajalein, Wotje, Maloelap, Jaluit, and Mille—setting the stage for the landings of Operation Flintlock on 31 January 1944. These heavily supported landings saw a much happier ending than at Tarawa; and Kwajalein, the largest atoll in the world, was secured by US forces in a few short days at a cost of only 332 Marine and Army soldiers killed while Majuro was taken unopposed.¹¹²

CAS in the Marshalls

The Marshalls—like the Gilberts—were coral atolls, so not surprisingly the lessons learned from Tarawa were well suited to operations in the Marshalls, thus resulting in much improved CAS.¹¹³ The drive through the Marshalls consisted of two major, sequential operations—seizure of Kwajalein atoll (including both Kwajalein Island and Roi-Namur Island) and the seizure of Eniwetok atoll (including Engebi, Eniwetok, and Parry Islands). The basic principles for CAS control remained the same, but many improvements had been implemented.

New command ships (AGC) were available for the drive through the Marshalls, and they provided a more complete and reliable network of radio circuits for assault operations than had the battleships.¹¹⁴ The new command ships sported separate support air request (SAR), support air direction (SAD), and support air observation (SAO) nets. The SAR net was for ALPs to request CAS missions from the CSA. The SAD net was used by aircraft arriving on station for reporting to the CSA and to receive instructions. The CSA could order them to wait, give them a target, turn them over to the ALP or the AC for further instructions. A special SAD-emergency net was available as well to report equipment failure or to use if the regular SAD net was overcrowded. The SAO net was an innovation, consisting of an airborne observer in contact with a ground officer reporting on progress of friendly troops, locations of enemy strongholds, enemy activities, and so forth—information that proved very useful to ground commanders.¹¹⁵ Even with all these improvements, however, there was still some difficulty experienced in accommodating all the headquarters for these operations on board. This was especially true of the ship that had to support Adm Richmond K. Turner's two headquarters (Joint Expeditionary Force, CTF 51, and Southern Attack Force, CTF 52), Gen Holland Smith's headquarters for CTF 56, and 7th Infantry Division's headquarters, Task Group 56.1.¹¹⁶

Another innovation available for the drive through the Marshalls was the establishment of the Joint Assault Signal Company (JASCO), a JCS-directed initiative in response to the need discovered at Tarawa to improve air and naval gunfire coordination. The JASCO was composed of a mixture of Navy-Marine or Navy-Army elements and was made up of three sections: naval gunfire control, air-ground liaison, and beach control. The air-ground liaison section was composed of 13 officers and 39 enlisted men and was divided into 13 ALPs attached to division, regiment, and battalion headquarters. While only one poorly trained and equipped JASCO was available for the Marshalls campaign, it still performed effectively.¹¹⁷

The fighters employed innovative new tactics as well, making their strafing approaches perpendicular to the beach at a steep angle, permitting fire directly on the beaches in front of landing craft, and increasing the opportunity for bullets to penetrate into enemy foxholes and trenches. The most effective approach against trenches was found to be diving at a 60-degree

angle and firing in short bursts from four thousand feet down to one thousand feet. Since artillery shells could go as high as four thousand feet, coordination with the JASCO was critical to ensure artillery was called off during these strikes. For strafing or bombing runs against a small target area, dry runs across the target at two hundred feet were implemented.¹¹⁸

At Kwajalein the fighting began 31 January 1944 with the seizure of small islets in preparation for the major landings the next day. On 31 January 1944, 85 sorties were made against four islets, 44 against Kwajalein Island, and 58 against Japanese boats in the lagoon.¹¹⁹ In addition, nine torpedo bombers and nine dive-bombers were kept continually in the air on alert, prepared to support the ground troops. The effectiveness of the support was demonstrated on one islet, where assault troops killed 65 Japanese but found 45 others already dead from the air strikes.¹²⁰

On the morning of 1 February 1944—an hour before the main landings—Seventh Air Force B-24s dropped 12 tons of bombs near the landing beaches; they were followed by dive-bombers and torpedo bombers striking pillboxes and defensive installations, and then the strafing began by the fighters.¹²¹ With the landings proceeding smoothly and few calls for CAS being made, the list of possible targets that had been made in advance proved its worth, enabling the CSA to keep his fighters effectively utilized when not needed for CAS.¹²² Altogether, 250 sorties were made against Kwajalein in support of the landing operations on 1 February 1944, and air support was judged to be highly effective.¹²³

The simultaneous operations against Roi-Namur (two islets connected by a causeway) proceeded in almost identical manner to those at Kwajalein Island.¹²⁴ Neighboring islets were captured the day before as positions for field artillery to support the landing, and preliminary air strikes followed the same pattern as on Kwajalein—223 sorties on 31 January 1944, and 122 on 1 February 1944. Some delays experienced in the landings tested the flexibility of the control system for air support, and good coordination between the CAP flight-lead and the CSA enabled effective adjustments, and there were no serious incidents of friendly fire reported.¹²⁵

Based on the rapid conclusion of Operation Flintlock's assault on the Kwajalein atoll with so few casualties, it was decided to accelerate the assault on the Eniwetok atoll (Operation Catchpole), using the reserve troops from Operation Flintlock that had not been needed.¹²⁶

Eniwetok atoll consisted of three islands (Engebi, Parry, and Eniwetok) that would be assaulted simultaneously on 17 February 1944, and by 22 February 1944 all were cleared of the enemy.¹²⁷ Eniwetok Island, where the fighting was the heaviest, generated the most CAS sorties of the Marshall campaign and so much was learned.¹²⁸ It was at Eniwetok where the fighters learned that shallow strafing against zigzag trenches only served to knock the sand off the ledges, and that the most effective angle of attack was 60 degrees.¹²⁹ Further, more fighters carrying bombs found that low-level skip bombing was often more accurate than conventional glide bombing.¹³⁰ Finally, the fighters found that to strafe effectively in confined

target areas, it was best to make a “dry run” at about two hundred feet to make positive identification, then climb to about two thousand feet to begin the actual firing run.¹³¹ Here again, and for the entire Marshall campaign, not one death resulted from friendly air fire.

Overall, the effectiveness of air operations in the Marshalls in February 1944 was a great improvement over the Gilberts and largely due to the lessons learned from the Gilberts.¹³² The innovations implemented above allowed the CSA to more effectively control attacks requiring naval and air gunfire coordination. However, it was also found that the airborne air coordinator was often in a better position to orchestrate attacks that required coordination with ground troops. While it had been hoped the ALPs on the ground would be able to direct such attacks, lack of training indicated that they would not have that capability in the near future. The overall experience from the Marshalls pointed to an increased role in direction of air strikes for the AC, not the ALPs. Ground commanders, not surprisingly, disagreed with this assessment and continued to lobby for increased ALP direction of air strikes from the ground, despite the fact that friendly fire incidents had been almost nonexistent—but this was not to be.¹³³

Summary

The drive through the Gilberts and Marshalls were defining campaigns for Hale's Handful. General Hale—leading from the front—took his previously defensive command, still chronically undermanned and under-equipped, and launched an all-out offensive in the Central Pacific in concert with Navy, Marine, and Army forces. He and his “handful” kept moving their bases ever-forward on tiny atolls where life was crude and uncomfortable, and there was little time for anything else but fighting.¹³⁴

His bombers flew nerve-racking missions, consistently at the very end of their planes' endurance, almost always unescorted, almost always hotly contested by the enemy, and with full knowledge that a ditched plane meant almost certain death. Yet they were the ones everyone came to count on to set the stage for successful amphibious operations—and ultimately they were up to the task. His fighters—itching to get in on the fight—defended the forward bases, jumped in to help out with CAS operations as soon as enemy fields were taken, and distinguished themselves in strike operations just as soon as technology gave them the “legs” to help out their heavier brothers. General Hale had forged a close team through the trials of combat, and his handful had become a real handful for the enemy.

The decisions General Hale made in January and February 1944 (to switch the heavies to night bombing and raise the altitude of B-25 bombing); while unpopular with his Navy masters, seem prudent in retrospect. While greatly reducing the number of casualties and damaged aircraft by these decisions, his bombers still played a key role in the tremendous success of the drive through the Marshalls.¹³⁵ True, there were growing pains in C² and instances of interservice friction to deal with. However, in

just over three months, from late November 1943 to February 1944, US forces spearheaded by the Seventh Air Force had shattered the defensive perimeter of the Japanese in the Central Pacific, bringing more than 800,000 square miles under US control—enabling the continually accelerating timetable for the defeat of Japan.¹³⁶

By the start of operations in the Marianas in June 1944, General Hale would no longer be the commander of the Seventh Air Force, though he would operationally control the majority of Seventh's aircraft in his role as commander of all shore-based aircraft in the Central Pacific forward area. While the nature of the combat would remain the same (i.e., long, over-water flights from far-flung islands and close support of amphibious operations), the topography of the island targets would change starting with the Marianas, making it much more difficult to extract the deeply entrenched Japanese. Finally, while the Seventh Air Force would soon grow in size beyond the characterization of Hale's Handful, the fighting spirit that General Hale imbued in the men of the Seventh Air Force and was characterized by the moniker Hale's Handful, would remain.¹³⁷

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Chapter 4

Later Campaigns: Neutralization of the Carolines, Marianas Campaign, Iwo Jima, and Okinawa

Probably the most unhappy Japanese in the world are those who still remain on the several Marshall Islands which we bomb daily. Today, some 10,000 Japanese left in the Marshalls may be slowly dying of starvation, aggravated by thirst.

—Maj Gen Willis H. Hale

Prologue

While the planners in Washington were wrestling with the decision to bypass Truk and invade the Marianas instead, Seventh Air Force bombers continued to pound the bypassed islands in the Marshalls, enabling the consolidation of gains taken by US forces during the drive through that archipelago.¹ However, even as this decision was being debated and new bases were being constructed in the Marshalls, initial bombing raids were simultaneously launched against enemy bases in the Carolines—Ponape in the Eastern Carolines and the great enemy bastion at Truk.²

In March 1944, new bases in the Marshalls became available, and the decision was made to bypass Truk in favor of an invasion of the Marianas, code-named Operation Forager.³ Now, bombing operations began in earnest to neutralize the Carolines, especially Truk—the “Gibraltar of the Pacific,” and the principal threat to landing operations in the Marianas.⁴ The bombing campaign against Truk was a shared, highly coordinated effort between the heavy bombers of the Seventh Air Force and the Thirteenth Air Force.⁵

During this time frame, and partly as a consequence of the spiraling growth of Seventh Air Force assets and span of control, another important decision was made—General Hale relinquished command of the Seventh Air Force and assumed command of Task Force 59, responsible for the operation of all shore-based aircraft in the forward area.⁶ While this decision had significant C² implications, it also served to preserve the status quo of a Navy-dominated Central Pacific—General Hale continued to work for Admiral Hoover in his new capacity as commander, Forward Area (Task Force 57).⁷

In April 1944, Seventh Air Force and Navy bombers began joint photographic and bombing raids against islands in the Marianas.⁸ However, the beginning of prebombardment attacks on the Marianas did not signal an

end to the need for neutralization attacks against bypassed islands in the Marshalls and the Carolines. While an almost daily need for neutralization bombing tapered off by the fall of 1944, neutralization bombing was required sporadically throughout the remainder of the war.⁹ Based on an ever-increasing number of bombing requirements, an increasing number of aircraft becoming available throughout the theater and General Hale's consolidated, operational control of all shore-based aircraft in the forward area, bombing operations increasingly became more "joint" in their makeup.¹⁰

During the assaults of Operation Forager, close support missions became even more joint than they had already been up to this point, as Seventh Air Force fighters played an active role in these operations for the first time.¹¹ However, despite more mature close support procedures utilized during the Marianas campaign, new challenges in the terrain of the objectives coupled with the fanatical fighting by the deeply entrenched Japanese led to mixed reviews of the effectiveness of CAS during weeks of bitter combat for US forces—especially at Saipan.¹²

Later, after a brief but bloody diversion to the southwest to invade the Palau Islands (the assault on Peleliu is well known for its bitter fighting), attention was focused on the Bonin and Volcano Islands and Okinawa. Iwo Jima (in the Volcano Islands) was a threat that needed to be eliminated as it lay in the flight path from the Marianas to the Japanese homeland. Securing Okinawa would enable it to serve as the final staging base if an assault on the main islands of Japan were needed. While Seventh Air Force fighters were fully integrated with Marine and Navy aircraft into a mature CAS process for these assaults, the intense fighting on Iwo Jima and Okinawa demonstrated that even with superior, coordinated firepower, the fanatical Japanese soldier—deeply entrenched in cave defenses—would be tough to eradicate.

This chapter will explore developing C² relationships and maturing joint doctrine in greater depth as it also focuses on the challenges the Seventh Air Force continued to overcome in playing a key role in neutralizing the Carolines, driving through the Marianas, and in assaulting Iwo Jima and Okinawa.

Neutralization of the Carolines

Even before the end of the drive through the Marshalls, neutralization efforts began against Ponape in the Eastern Carolines, primarily because the airfield there threatened the flank of Operation Catchpole to assault Eniwetok atoll.¹³ However, while Ponape lay only 400 miles from operations at Eniwetok, it was approximately 1,085 miles from the Seventh Air Force's forward base at Tarawa. Accordingly, bomber missions against Ponape averaged 2,200 miles of nonstop, overwater flying.¹⁴

Nevertheless, on 15 February 1944, 24 Seventh Air Force Liberators pounded the airfield, seaplane base, waterfront areas, and town of Ponape with 58 tons of high explosive (HE) bombs.¹⁵ Over the course of four

raids and with only one B-24 loss, the town was virtually destroyed, and the seaplane base was "pounded into uselessness."¹⁶

Additionally, while it was still undecided whether to invade the Carolines next, or to bypass them and attack the Marianas instead, either course of action would necessitate preliminary neutralization efforts against Truk—the major Japanese bastion and resupply line that would have to be dealt with before any "next step."¹⁷ Therefore, on 16 and 17 February 1944—even as the assault on Eniwetok was just beginning—Navy planes from the Task Force 58 carriers worked over Truk, destroying 26 merchant vessels, six Navy vessels, 270 aircraft, and shore facilities.¹⁸

Raids on Truk

Part of the decision to bypass Truk and invade the Marianas was based on the assumption that airpower would be able to deny enemy use of their naval base and airfields at Truk and on other islands in the Carolines (especially Ponape).¹⁹ As noted above, carrier airpower had already demonstrated the ability to punish these targets and overwhelm enemy opposition; however, neutralization of the Carolines would require almost daily attacks over an extended period of time, so the task understandably fell to the heavy bombers of the AAF.²⁰ These operations received little fanfare or publicity even within the Pacific theater; however, they were vital in protecting Gen Douglas A. MacArthur's right flank as he drove through Hollandia to Morotai and for Nimitz as he drove through Saipan and the rest of the Marianas.²¹ Appropriately, neutralization of the Carolines was a shared effort by bombers of the Thirteenth Air Force from the South Pacific and the Seventh Air Force from the Central Pacific, and coordination was worked out by radio and conferences between the headquarters of MacArthur and Nimitz.²²

The principal targets of the Truk atoll lay on the islands of Dublon, Eten, Moen, and Param and consisted of the Japanese headquarters major storage and repair facilities, a seaplane base, a submarine base, barracks, two radio stations, and four airfields.²³ While air defense on Truk was overrated by US intelligence (i.e., only 40 antiaircraft guns with no fire-control radar), their early warning radar generally gave them ample warning of incoming strikes by the heavy bombers from the Marshalls.²⁴

Two squadrons of Seventh Air Force bombers made the first strike against Truk with night missions originating from Makin and Apamama in the Gilberts on 14 March 1944 and staging through Kwajalein in the Marshalls.²⁵ In all, 13 bombers from the two squadrons made it through to Truk; and while the first arrivals over target found Truk lit up and no antiaircraft fire, subsequent flights found Truk blacked-out and were greeted with increasingly intense, though inaccurate antiaircraft fire.

Generally, the results of the mission were considered good, with Dublon and Eton Islands receiving a good working over; however, one squadron had flown a total of 3,218 miles before getting back to Makin and the other more than 3,700 miles before arriving at Apamama.²⁶ While all the pilots

believed these distances were too far to support sustained bombing of the Carolines, their job was made considerably easier in late March and early April of 1944 when both the 30th Bomb Group and the 11th Bomb Group moved forward to Kwajalein atoll in the Marshalls.²⁷

Thereafter, the neutralization of Truk tended to rotate between strikes by the Seventh Air Force and strikes by the Thirteenth Air Force, and operations—while still arduous—tended to become repetitious and boring except, of course, for the time bombers spent over their targets.²⁸ By the end of April 1944, the two bomber groups of the Seventh Air Force had flown 329 sorties against Truk, dropping 734 tons of bombs with a loss of only five planes.²⁹ AAF bombers got powerful help on the last two days of April 1944 when planes from Admiral Mitscher's Task Force 58—retiring from the southern Pacific Hollandia invasions—launched a two-day assault on Truk. They flew 2,200 sorties, dropped 748 tons of bombs, shot down 59 enemy planes, destroyed 34 others on the ground, and extensively damaged installations on the atoll.³⁰ While Japanese air strength was all but eliminated by the end of April 1944, the enemy continued to ferry in replacements (up to 60 percent), forcing AAF bombers to periodically revisit Truk throughout the summer and fall of 1944 to keep it neutralized.³¹

During this period, Seventh Air Force heavy bombers flew several long-range strike attacks north against Wake Island to neutralize airfields that could interfere with the upcoming Marianas operations.³² Additionally, as assault operations drew to a close in the Marshalls, neutralization operations against the four bypassed atolls in the Marshalls (Maloelap and Jaluit as primary targets, and Mille and Wotje as secondary) were conducted by Seventh Air Force medium bombers, as well as Marine and Navy aircraft. After the Navy completed its airfield at Majuro, Seventh Air Force B-25s would fly out of Tarawa, bomb Jaluit or Maloelap, land at Majuro to rearm and refuel, then bomb the other target on the way home.³³ For example, in May 1944, the heaviest neutralization raid in the Marshalls was made on Jaluit, using 43 B-25s, 52 B-24s, 95 F4U Corsairs, 64 SBD Dauntlesses, and 26 F6F Hellcats—dropping 240 tons of bombs.³⁴

However, this was only one of several joint strike packages General Hale experimented with in May 1944. Joint attacks using Seventh Air Force Liberators and Mitchells along with Navy and Marine F6Fs, F4Us and SBDs were also launched against Jaluit, Wotje, Nauru, and later against Ponape, after completion of staging facilities at Eniwetok in the spring of 1944.³⁵ These joint attacks were highly effective. For example, in four strikes by Seventh Air Force Mitchells and Navy Corsairs on Ponape (staging through Eniwetok), the B-25s came in low, bombing and strafing with cannon and machine guns, while the Navy Corsairs helped take out opposing Japanese fighters.³⁶ On two of the Ponape missions, the B-25s claimed eight of the intercepting fighters, while losing only one Mitchell.³⁷ With more staging bases placing more targets within escort range, as well

as within range of rescue aircraft, survivability of the missions increased as well, with presumably higher morale as a result.

However, General Hale's increased experimentation with joint strike missions was more than merely a function of the increased proximity of staging bases to targets. In May 1944, General Hale was appointed COMAIRFORWARD, Task Force 59. For the first time, he had operational authority over all the services' shore-based airpower to centrally direct joint, massed attacks.³⁸

Command Issue

The decision to have General Hale relinquish command of the Seventh Air Force in order to become COMAIRFORWARD represents a compromise solution to a variety of problems, both current and anticipated. Aside from highlighting more immediate difficulties between General Hale and his Navy boss, Admiral Hoover, it also reflects more general concerns of AAF and Army commanders about naval commanders in authority in the Central Pacific at that time.³⁹

During operations in the Gilberts and Marshalls, all striking units of the Seventh Air Force had been included in Task Group 57.2, commanded by General Hale, who also retained command of the Seventh Air Force. This Task Group, however, was part of Task Force 57, commanded by Admiral Hoover, who had operational control of all shore-based aircraft and the bases and forces from which they operated.⁴⁰ As previously noted, General Hale and Admiral Hoover did not get along personally and disagreed fundamentally on the proper employment of airpower, prompting General Richardson, commander of Army Forces in the Central Pacific (COMAIRCENTPAC), to write a letter of complaint about Admiral Hoover on General Hale's behalf to Admiral Nimitz.⁴¹

An excerpt from a digest file of a telephone conversation between General Arnold in Washington and General Richardson in Hawaii on 2 February 1944 sheds more light on this issue: "Richardson states that Hale 'has been under the command of Hoover' (COMAIRCENTPAC) but Nimitz 'has insisted that Hoover give Hale his missions and objectives and desist from telling him what other planes will be employed which was his policy in the beginning.'"⁴² Clearly, General Hale believed Admiral Hoover was micromanaging his forces, and to the extent that Admiral Nimitz had interceded on his behalf once already, this would seem to be the case. However, beyond this specific instance, AAF and Army commanders (such as General Richardson) also generally believed that naval commanders—who were almost always in authority over AAF and Army units in the Central Pacific—sometimes went beyond the limits of approved joint Army-Navy doctrine in directing the activities of those units.⁴³

In fact, in General Richardson's case, discussions among officers at commander in chief, Pacific (CINCPAC) headquarters at the time indicated that he was determined to wrest control of soldiers from the Marines and Army airmen from the Navy.⁴⁴ According to Potter in his biography, titled

Nimitz, "More specifically, he was intent on shooting down General Holland Smith and Admiral John Hoover."⁴⁵ Evidently, having gotten no satisfaction in these aims thus far, General Richardson decided to bypass Admiral Nimitz, and accompanied by General Hale take the matter straight to Washington.⁴⁶ This, in turn, prompted Admiral Nimitz to send Adm Ernest J. King in Washington a heads-up letter on 18 February 1944.

Dear King:

Lieutenant General Richardson and Major General Hale are about to leave for Washington for conferences in the War Department. I feel that you should be informed of certain matters that they may discuss with General Marshall and General Arnold and which may, therefore, be discussed with you during their visit.

Richardson has informed me that he proposes to organize an Army Corps under Major General Corlett who now commands the Seventh Army Division. He apparently visualizes use of such a corps in amphibious operations in the Central Pacific Campaign as an entity separate and distinct from the Fifth Amphibious Corps. I told him that the creation of a corps command for army purposes was an army matter to which I could interpose no objection, but that command arrangements for future operations would not be settled now.

I oppose the establishment now of another amphibious corps in the Central Pacific, and reserve the right to employ army divisions as components of the Fifth Amphibious Corps. If two or more army divisions are employed in a single operation such as the capture of Truk, the existence of an Army corps command may have some advantages, but I would insist on having all troops in the operation under one general officer who would, initially at least, be the Commanding General of the Fifth Amphibious Corps.

Richardson expressed the very emphatic view that if one general officer should command all five divisions that might be engaged at Truk it should be an Army officer; and that he would strongly protest both to CinCPOA and to General Marshall against a Marine officer exercising such command. The matter, however, was not further discussed at this time.

Richardson then proceeded to indict in a courteous manner, but in extremely positive terms, the competence of Holland Smith in particular, and of senior marine officers in general, to command large bodies of troops. He also alleged lack of discipline and superficial training among the Marines in this area. I invited him to submit his views to me in writing. He complains of the extent to which naval officers are in command in the forward area and expresses his opinion that all island commanders should be army officers.

Both Richardson and Hale may bring up the question of command of shore based air forces in the forward area. Richardson is critical of Hoover's methods in spite of our recent successes. Sherman brought me your penciled notations on the papers shown you. He did not discuss the question in Washington outside your headquarters. I intend to defer any action and retain the present arrangements for the time being, at least until the CATCHPOLE (Eniwetok) operation is completed.

I propose to handle all the foregoing matters locally and bring them to your attention only as a precautionary measure in case they are broached in Wash-

ington. They are, for the most part, outcroppings from the clash of difficult personalities and will not be removed by changes in organization.

Although Richardson is frequently critical of naval or marine personnel organization and methods it is not to be inferred that our personal relationships do not continue to be friendly. We meet almost daily and he frequently gives verbal assurance of his wholehearted cooperation. He is encouraged to discuss any matter with me with great freedom and he does so. This final paragraph is added that you may not gain an impression of strained relationships between Richardson and myself; but will understand that the letter is solely to acquaint you in advance with certain of his views that may come to your attention while he is in Washington.

With kindest regards and best wishes.

Sincerely,

C. W. Nimitz⁴⁷

While records of a meeting of Generals Richardson and Hale with Generals Arnold or Marshall were not found, Admiral Nimitz's point about the bad timing of such a meeting in light of recent successes in the Marshalls should have been well taken. In fact, it leads one to question whether bypassing Nimitz to pursue this issue in Washington was the driving motivation for the trip at all. Additionally, there is evidence that the issue of command of airpower in the Central Pacific was being discussed at these same levels of leadership well in advance of the date of Admiral Nimitz's letter and involved more than just personality conflicts as implied above.

A further excerpt from the digest file of a telephone conversation between General Arnold in Washington and General Richardson in Hawaii on 2 February 1944 highlights some of leadership concerns about command of airpower in the Central Pacific:

Re Air Command in Central Pacific, and advance information preparatory to Admiral Sherman's and Admiral Power's visit to Washington. Nimitz wants Hale to command Northwest aviation. Navy wants to form a Task Force which would separate Hale from 7th Air Force. Richardson wants Hale to retain command of 7th Air Force and he could run it with a deputy. Arnold is in accord and will have information available to meet Navy objections to carrying out the organization as you proposed it. Richardson points out that supply of Air Forces can't be split up as would be required under the Task Force concept. Arnold says that he feels that there should be one man in command of all land-based aviation, and that the 7th Air Force retain its identity. Arnold says he can't agree to anything except that Hale command the 7th Air Force.

Richardson states he has "already persuaded Admiral Nimitz that Hale can command all the land based aviation, that includes the Navy and the Marines, and also retain his 7th Air Force."

Navy is raising question at this time to establish for the Pacific when there is an "increase to the Air Force after the defeat of Germany."⁴⁸

This conversation highlights two key issues in considering future command of airpower in the Central Pacific. First, in order to maintain the

integrity of the Seventh Air Force, it was General Richardson's opinion that War Department regulations would require that General Hale have logistical and operational control of aircraft throughout the Central Pacific.⁴⁹ However, as operations continued to expand throughout the Central Pacific, this arrangement posed considerable difficulty within the construct of the naval task force organization—a construct likely to be enduring in a navy-run theater.⁵⁰ Additionally, by the time of the Marianas campaign, General Hale's span of control had already grown to 106,000,000 miles, a span of control outstripping most naval commanders in the Pacific apart from Admiral Nimitz. Therefore, it is reasonable to assume it would be difficult to deny the Seventh Air Force a larger voice in theater operations in general if the Seventh Air Force were not separated from the ever-growing operational control of airpower in the forward area.

This reasoning demonstrates the criticality of the second issue—the increasing growth of air forces as the war with Germany drew to a close. However, aside from concerns about who would operationally control greatly augmented air strength from the redeployment of units in Europe, what AAF leadership in Washington was most concerned about was the future employment and control of the B-29s to the Central Pacific.⁵¹ Needless to say, it did not bode well for the employment and control of the B-29s if the AAF could not gain operational control of the bombers already in the Central Pacific.

Interestingly, what Admiral Nimitz initially proposed was to establish a Task Force to include all shore-based airpower which General Hale would command, but it would be under the *control* of the commander Aircraft, Central Pacific Area (Admiral Hoover), who would be designated commander, Forward Area.⁵² General Hale immediately opposed this arrangement, rightly asserting that this merely maintained the status quo, albeit with new titles and that control of all air operations would be in the hands of Admiral Hoover.⁵³

General Hale offered as a counterproposal that a navy officer be named the area commander, in charge of maintenance, logistics, defense, and operation of all shore and harbor installations.⁵⁴ Then, he proposed the commander, Seventh Air Force be designated as commander Airlift, Central Pacific, with operational control of all shore-based aircraft, and with a chain of command that chopped directly to Admiral Nimitz, commander in chief, Pacific Ocean Area (CINCPOA) or to the major task force commander (Admiral Spruance), as the situation might dictate.⁵⁵ Aside from the obvious bypassing of Admiral Hoover in his proposed chain of command, this proposal was probably unacceptable in that it did nothing to curtail the spiraling growth of the Seventh Air Force's span of control.

In the end, as a compromise solution, Admiral Nimitz announced that on 1 May 1944 General Hale would take command of the newly established joint Task Force 59, Shore Based Air Force, Forward Area, with the title of COMAIRFORWARD.⁵⁶ As such, General Hale was to have operational control of all shore-based aircraft in the forward area. However,

General Hale would continue to work for Admiral Hoover who was now designated as the commander, Forward Area (Task Force 57, of which General Hale's Task Force 59 was now a part).⁵⁷

Furthermore, in order to assume command of Task Force 59, General Hale had to relinquish command of the Seventh Air Force to Brig Gen Robert W. Douglass Jr. who had been in command of VII Fighter Command up to that point.⁵⁸ Ultimately, it seems reasonable to presume that securing the operational control of the bombers (especially with the projected deployment of B-29s to the theater) became the defining argument for General Arnold—resulting in a reversal of his initial position that General Hale should retain command of the Seventh Air Force.

Finally, it would appear that the final agreement reached represents a compromise on General Arnold's part wherein he sacrificed General Hale as commander of the Seventh Air Force, satisfying the Navy's concern over General Hale's spiraling span of control. In return, General Hale was given full operational control of all shore-based airpower in the forward area of the Central Pacific, and most importantly, of the heavy bombers—satisfying the ultimate goal of guaranteeing full operational control for the AAF of the forthcoming B-29 Superfortresses.

Marianas Campaign

On 12 March 1944, the decision was made by the Joint Chiefs of Staff to bypass Truk in the Carolines and capture Saipan, Tinian, and Guam in the Marianas next after operations in the Marshalls.⁵⁹ The Marianas campaign was code-named Operation Forager and had a target date of 15 June 1944.⁶⁰ There were several considerations that put the Marianas, rather than the Palau or Truk, or some other southwesterly target in the strategic picture.⁶¹ For one thing, driving through the Marianas would breach the new Japanese defensive line in the Pacific at its center.⁶² Additionally, conquest of the Marianas would leave the enemy guessing about our next move, while giving the Allies a choice of moves: southwest to Palau, west to Leyte or Luzon, northwest to Formosa, or up the Bonins to Japan.⁶³

Moreover, from a Navy perspective, the Marianas campaign would allow development of Guam and Saipan into advanced naval bases.⁶⁴ Finally, from an AAF perspective, capturing Saipan, Tinian, and Guam would allow airfields to be constructed to accommodate the new, soon to be available, very heavy bombers—the B-29s.⁶⁵ From these islands in the Marianas, the B-29s would be in range of the Japanese home islands and would be able to bring the heart of Japan under heavy attack for the first time in the war.⁶⁶

The decision to assault Saipan first had two major reasons to recommend it. First, Saipan had the best airfield in the Marianas and was 100 miles closer to Japan than Guam.⁶⁷ Second, assaulting Saipan first would block off neighboring Tinian from reinforcement, as well as Guam to the south, making their subsequent capture easier.⁶⁸

Support Challenges in the Forward Area

Life in the forward area for the pilots, crew, and ground support personnel would continue to be austere, and maintenance challenges previously highlighted continued to abound. Equally severe as these issues in island warfare was the problem of supply and, as with maintenance challenges, many of the solutions were highly experimental.⁶⁹ It should come as no surprise that supply would pose a delicate problem in joint operations in the Central Pacific, since the needs of all services had to be adjusted against available stocks and especially against available shipping space.⁷⁰ Unfortunately, a complicated command structure aggravated supply problems as well—Seventh Air Force units were supplied by Army Service Forces (ASF) through the US Army Forces in the Central Pacific Area (USAFICPA) but got moved in shipping allocated by the Navy.⁷¹ That problems would arise with these complicated organizational schemes—with constantly accelerating deadlines—across thousands of miles of ocean in a bullets-flying environment is obvious.⁷²

The one redeeming factor in this difficult situation was the willingness of virtually all agencies and personnel to cooperate with one another to get the job done for the combat troops on the islands.⁷³ For example, if ASF indicated that certain air force supplies would not be available in time for a scheduled assault, USAFICPA depots would cover the shortages from their stocks with the understanding that they would replenish their stocks when the air force shipment arrived from the states.⁷⁴ Furthermore, there was free exchange of equipment among the Army, Navy, and Marines to meet the needs of all.⁷⁵ Likewise, there was full cooperation among all services in utilizing types of bombs and ammunition common to all. Accordingly, at each base, the service with the greatest concentration of tactical and service units was in charge of supplying bombs and ammunition to all three.⁷⁶

Even with this level of cooperation, life for the troops on the islands was at the no frills, basic subsistence level of existence, and stories abound of ingenious ways the men came up with to make their lives even a little bit more comfortable. Several news releases from the period highlight various makeshift showers the men designed on the islands—from basic designs like an empty gas drum and a few coconut logs to elaborate contraptions using a bike pump to force water under pressure through a shower head made from a perforated beer can.⁷⁷ Likewise, other stories highlight how men on various islands designed and built washing machines—from an NCO who fashioned a discarded hydraulic actuating cylinder and howitzer shell into an agitator to a lieutenant colonel who harnessed the trade winds through a wind mill he built to power a washing machine.⁷⁸ Finally, there is the story of four NCOs who turned the fuselage of a crashed C-47 transport plane into their permanent quarters—the only consistently dry one available on the entire island.⁷⁹

However, despite a high degree of teamwork and ingenuity, island life was tough work constantly putting up missions, and nights could be long as well as nerve-racking.⁸⁰ Shortly after Aslito Airfield had been captured and put into use by AAF forces on Saipan, on the night of 26 June 1944 a Japanese sabotage party sneaked onto the airfield to destroy parked P-47s.⁸¹ At the same time, more than 300 Japanese troops broke through infantry lines and made it to the airfield as well. Men of the 318th Fighter Group immediately became infantry soldiers, and held their own—by dawn the enemy was gone, and only one P-47, "Hed Up 'N Locked" of the 73d Fighter Squadron had been destroyed by Molotov cocktails.⁸²

Mundane, daylight duties could become exciting too. For example, one news release tells the story of Seventh Air Force Pvt Jack Lucas, who was detailed to get a barrel of gas from the island "tank farm":

En route to the gas dump, Lucas and another 7th Airforceman passed the desolate caves in which remnants of the original Jap garrison have been hiding.

"We thought we'd scout around for a few minutes for souvenirs," Lucas related. "We poked around and almost stumbled over a Jap who was seeking cover in a small crevice."

"Neither of us had weapons; the Jap pulled out a hand grenade, and we tore out of there. I ran to an Infantry bivouac half a hundred feet away, grabbed a rifle, and hurried back. A Naval officer joined me, and after a short search we found the Jap hiding in another cave. Two shots and he was dead. I didn't give him a chance to lob a grenade at us."⁸³

Souvenir hunting in the Central Pacific could be hazardous to your health indeed.

Bombing Operations in the Marianas

In April 1944, Seventh Air Force bombers added the Marianas to its ever-growing list of targets.⁸⁴ From bases on Eniwetok in the Marshalls, the heavy bombers began to pound Saipan, Tinian, and Guam—bases that would house the giant B-29s for the final strategic blow against Japan.⁸⁵

However, the first strikes—on 18 and 25 April 1944—were joint missions, as well as some of the longest shuttle-bombing missions of the war.⁸⁶ It had been so long since anyone had seen the southern Marianas that photographic information about the beaches and Japanese defenses were vital for upcoming assault operations.⁸⁷ Accordingly, Navy Liberators (PB4Ys) from the photographic wing of the Air Solomons (AirSols) command flew from Henderson Field, Guadalcanal, to Eniwetok, where they refueled and met up with Seventh Air Force Liberators (B-24s) who served as their escorts.⁸⁸ On 18 April 1944, five PB4Ys and five B-24s departed Eniwetok for a photo and bombing run over Saipan.⁸⁹ On this mission the Liberators fought off 18 enemy interceptors, dropped 100 lb bombs on targets of opportunity, and had to ditch one plane on the way back—luckily near a Navy destroyer.⁹⁰

On 25 April 1944, seven PB4Ys and seven B-24s took off from Eniwetok to Guam. On this mission, though, after the photo and bombing runs, the B-24s flew to Los Negros in the Admiralties. There, they refueled and loaded back up with bombs and attacked Ponape on their way back to Eniwetok—for a mission of more than 3,300 miles.⁹¹ In May 1944, four more joint photo and bombing missions were flown over the Marianas; and during the last mission on 29 May 1944, one B-24 was lost to interceptors.⁹²

However, during May and June of 1944, and especially in the weeks leading up to D day for the assault on Saipan (15 June 1944), the primary mission for Seventh Air Force heavy bombers was the neutralization of Truk—the principal threat to operations in the Marianas.⁹³ The almost daily attacks needed to neutralize the Carolines received little publicity, and it is not clear the men really understood the vital role they played in protecting MacArthur's right flank and Nimitz's left flank; but these efforts constituted a major contribution to the success of the Marianas invasion.⁹⁴ Also important were the increasingly joint strikes General Hale was launching to ensure the continued suppression of enemy activity on the bypassed islands in the Marshalls.

CAS in the Marianas

As noted, the major islands involved in the drive through the Marianas group were Saipan, Tinian, and Guam—islands with mountainous terrain that were too large to be neutralized by air and navy bombardment but too small for freedom of maneuver. Saipan was to be assaulted first, to sever nearby Tinian and Guam (100 miles south) from reinforcement, thereby facilitating their subsequent capture.

Saipan

Air bombardment of Saipan started four days prior to landings on 15 June 1944, naval bombardment started two days prior to landings, and planes from 16 fast carriers and 11 escort carriers (CVE) participated in the landings. On the morning of the landings, the naval guns were responsible for neutralizing the beaches and up to one thousand yards inland, while the air coordinator and flight leaders were given almost complete freedom to select targets of opportunity from the air.⁹⁵

Whereas in the Marshalls operations, most supporting fire for the landing craft was supplied by artillery from adjacent islets; at Saipan this was not possible, so air strikes were substituted.⁹⁶ About 50 naval fighters and torpedo bombers pelted the beach with bullets and rockets when the landing craft were eight hundred yards from shore; and when they were within one hundred yards from shore, the pilots moved their aim point inland one hundred yards until the landing craft hit the beach.⁹⁷

Despite the heavy amount of air and naval bombardment, Japanese mortars, machine guns, and even artillery opened up when our landing

craft passed the reefs on the way to the beaches. Naval guns had failed to take out enemy guns within one thousand yards of the beach, and naval air had failed to take out enemy guns further inland. Due to the ineffectiveness of this preparatory fire, casualties during the first two days were much higher than expected—a staggering four thousand men.⁹⁸

Accounting for the failure of preparatory bombardment at Saipan is difficult to do with certainty, since similar procedures had been successful in the Marshalls and would be successful again at Tinian and Guam.⁹⁹ The lack of artillery support was likely an important factor, yet no artillery support was available for the assault phase on Guam either. However, on Guam—unlike at Saipan or in the Marshalls—a carefully prepared, prioritized target chart was kept up-to-date throughout the campaign.¹⁰⁰ Quite possibly the amount of air support available at Saipan was more than the Commander Support Aircraft (CSA) could handle without a prioritized list of targets to work from.¹⁰¹

Unfortunately, CAS operations during the assault phase of Saipan were as unsatisfactory as the preparatory bombardment.¹⁰² The biggest complaint of the ground commanders was the average delay of an hour or more from the time of a request to the execution of the mission. One contributor to this delay was the fact that the CSA often had to deal with up to 12 urgent requests at a time but, with such a small overall battle space, only one strike mission at a time could be coordinated and launched. Additionally, with three divisions ashore during this operation, 41 ALPs were on the SAR net at any one time, along with the CSA and carrier commanders—and carrier commander transmissions (even if only administrative), took priority.¹⁰³ To cope with this, the CSA set up a “filter officer” to screen incoming requests, and landing-force CSAs (LFCSA) were established ashore at regimental and division command posts to help “filter” as well. While these filters no doubt added to the delay, they also undoubtedly helped prevent friendly casualties and increased the effectiveness of the strikes launched.¹⁰⁴

The Allies captured Aslito Airfield, later renamed Isley Field in honor of a Navy pilot, and work immediately began to recondition it for use by Allied fighters.¹⁰⁵ On 20 June 1944, 24 of 73 Seventh Air Force P-47D Thunderbolts housed aboard escort carriers were catapulted—the first time P-47s were launched from carrier decks at sea—and flew in to Isely Field on Saipan.¹⁰⁶ Within four hours, the P-47Ds were armed with rockets and launched an attack on enemy positions on Tinian.¹⁰⁷

Within two days, the fighters were up to full strength on Saipan and, while their primary mission was defensive cover of Saipan, about a third of their missions in June and July 1944 were in close support of ground forces.¹⁰⁸ Some of their strikes were very successful, such as the 3 July 1944 mission after which ground forces reported finding more than 1,000 enemy dead in a ravine, the majority killed by strafing.¹⁰⁹ However, on another mission, a pilot who thought a mortar flash was a target marker fired on friendly positions, killing and wounding several men.¹¹⁰ This incident

prompted the CSA and AC to require dry runs over targets before expending ammunition.¹¹¹ This procedure only exacerbated the chronic complaint of ground commanders in the Central Pacific regarding CAS—the time lag between the request and the execution of close support missions.¹¹²

Despite overall ground commander dissatisfaction with CAS on Saipan, some procedures showed improvement. For example, fluorescent panels were used to mark the front lines, which the pilots found easier to see. Additionally, smoke shells were found to be the most visible way to mark targets, although with the amount of smoke on the battlefield in general, support planes had to be in direct communication with an ALP (or other ground controller) who could call out the instant a smoke shell exploded.¹¹³ Moreover, while mapping quality still needed improving, air target maps—capable of guiding pilots to the general area of the target—were in the hands of pilots, infantry, artillery, and naval gunners alike.¹¹⁴

Finally, it must be noted the time lag that ground commanders complained of was basically irreducible. With three infantry divisions operating on a small island, having planes under control at all times was essential. To achieve that control, the filters inserted into the chain of command discussed above were indispensable, despite increased delays they caused. Likewise, while no one would argue the necessity of coordinating air strikes with artillery and naval gunfire, this also generated time lag. While air and naval coordination was usually pretty timely, since the CSA was located on the flagship, coordination with artillery was far more difficult, and posed a greater threat to the aircraft than naval gunfire, based on its higher trajectory.¹¹⁵ Lastly, while requiring dry-runs clearly added time as well, few ground commanders would have done without them—since despite all these precautions, bullets, bombs, and rockets still sometimes hit friendly forces.¹¹⁶

Tinian

Organized resistance on Saipan ended on 9 July 1944, and while “mopping up” actions against fanatical defenders continued—a process that would have to be repeated on every island assaulted—P-47s from the Seventh Air Force intensified preassault bombing and strafing operations against Tinian.¹¹⁷ The capture of Tinian and the recapture of Guam were for all intents and purposes carried out simultaneously.

The assault on Tinian was carried out as a shore-to-shore movement from Saipan, beginning on 24 July 1944.¹¹⁸ Preparatory bombardment for Tinian was more effective than on Saipan in part because there was more time to compile target data, strike them, and keep their status up to date.¹¹⁹ On the other hand, prebombardment of Tinian was likely more effective since artillery firing from Saipan was also available for use in addition to airpower.¹²⁰

Tinian also was a benchmark in the Pacific the first time napalm was employed, dropped from tanks fitted to Saipan-based P-47s.¹²¹ While napalm

was not a major factor in the campaign—due in part to its limited supply—it proved clearly superior to any other previously used incendiary to clear sugarcane and underbrush and was effective against enemy troops in fox-holes and trenches as well.¹²²

CAS became more important after the initial assault, since the Marines quickly advanced beyond the effective range of artillery based on Saipan.¹²³ In response, an average of 175 CAS missions a day were flown from the carriers and from Saipan throughout the remainder of July 1944. In addition to Seventh Air Force P-47s and Navy TBF Avengers, Seventh Air Force B-25s were given a rare opportunity in the Central Pacific to fly missions for which they were uniquely suited—low-level, close support attacks with machine guns and cannons blazing.¹²⁴ The Mitchells were used in this manner again, and with great effect, on Guam.¹²⁵ On 31 July 1944, with the enemy driven into last-ditch positions on the end of the island, all naval and artillery gunfire was halted for an hour as 125 P-47s, B-25s, and TBFs pounded the restricted area with 69 tons of bombs.¹²⁶ Prisoners of war later reported this assault was “almost unbearable.”¹²⁷

Once again, the most common complaint of ground commanders on Tinian was the length of time from request to execution for CAS strikes.¹²⁸ When aircraft were overhead awaiting assignment, the average delay was approximately 30 minutes—sometimes only 15 minutes.¹²⁹ However, when planes had to be scrambled from Isley Field on Saipan, or from the carriers, the time lag was at least an hour. Unfortunately, even the history from later campaigns would show that this delay was virtually an irreducible minimum if planes were to be kept under centralized control.¹³⁰

Coordination of air strikes with artillery was a problem that also remained unsolved at Tinian.¹³¹ It was the responsibility of the requesting ALP to secure the cooperation of the artillery through the ground force commander. However, repeatedly on Tinian strikes would be set up with assurances from the ALP that artillery would stop, only to find that it could not be stopped, causing the cancellation of the CAS strike.¹³² One suggestion to remedy this was to put air, naval, and artillery officers together as a unit ashore to decide on the best weapon to employ.¹³³

Guam

The assault on Guam was delayed until 21 July 1944 because of the intense opposition encountered on Saipan. However, there was a bright side in that the delay allowed more time for systematic prebombardment of specific targets on Guam.¹³⁴ The directors of the prelanding naval and air bombardments kept up-to-date target charts and files on the current status of targets, which helped to eliminate in advance many positions which would have required air, naval gun, or artillery to eliminate after the troops were ashore and under fire by them.¹³⁵

While the organization and roles of the CSA and AC were the same as in previous assault operations, the LFCSA—who had been little more than a liaison officer with the landing force previously—assumed greater importance

on Guam. A Marine officer set up an improvised LFCSA early in the operation; and by 2 August 1944, the LFCSA directed all close support missions until the end of the operation.¹³⁶

Probably the most important innovation from the Marianas campaign was a technique called "Plan Victor," which enabled simultaneous air and naval bombardment of the same target or target area. This technique worked by restricting naval gun trajectories to below 1,200 feet and restricting aircraft from descending to less than 1,500 feet. Since naval guns had a flatter trajectory than ground artillery, effectiveness was not greatly reduced. Similarly, for the aircraft, Plan Victor did not affect dive-bombing and high-level strafing, though naval gunfire would still have to be halted if low-level strafing or skip bombing was needed.¹³⁷

For an hour on D-day morning, 21 July 1944, 312 aircraft from three fast carriers struck the western side of Guam, dropping 124 tons of bombs.¹³⁸ Naval gunfire continued under Plan Victor during this phase. Once the landing craft were within 1,200 yards of the shore, two air observers (one over each beach) released parachute flares to signal the naval guns to lift their fire inland from the beach. Then, fighters dropped instantaneously fused depth charges on the beach and subsequently took up strafing parallel to the beach until the troops were actually on shore.¹³⁹ As the Marines were establishing a perimeter, torpedo bombers and fighters with rockets attached focused on an area between 1,500 and 2,500 yards in from the beaches.¹⁴⁰

While Guam would still be the scene of heavy fighting for marines and infantrymen, there was no punishment on the beaches as had been the case on Saipan. Credit for this outcome can be attributed to the well-planned and well-executed preliminary bombardment and the highly coordinated air strikes and naval gunfire on the morning of the landings.¹⁴¹

After the initial assault, mainly Navy fighters and torpedo bombers provided close support on Guam; however, Seventh Air Force P-47s and B-25s flew down from Saipan to provide strikes as well. Three squadrons of Marine fighters arrived on Guam on 4 August 1944, but by then the stiffest resistance had been broken and calls for CAS began to trail off.¹⁴²

In assessing CAS on Guam, the commander of the 1st Provisional Marine Brigade stated "the accuracy of the fighters was so poor their close support work should be limited to strafing."¹⁴³ Comments by ground commanders and other Marine Corps records also indicate that CAS on Guam left a lot to be desired.¹⁴⁴ While this may be true, it is also likely that had these been the same troops and commanders who had assaulted Saipan, significant improvement would have been noted. On balance, the evidence indicates that CAS on Guam was better than during any previous operation in the Central Pacific.¹⁴⁵

Marine commanders would consistently recommend that CAS for Marines be provided only by Marine air and would assert that Marine pilots were better at CAS than Army or Navy pilots. However, in mid-1944, Marine air units had little experience in CAS, and it was not reasonable

to expect that they would be better than Army or Navy units with similar experience. Reality was that while Marine pilots were good, Army and Navy pilots were equally proficient.¹⁴⁶

Similarly unrealistic was the consistent recommendation from Marine commanders that ALPs direct all close support strikes. While some ALPs could direct some strikes, it was only possible under the close supervision of the CSA or LFCSA. This close supervision was necessary to prevent ALPs from directing air strikes on targets too close to adjacent units for safety.¹⁴⁷ Understandably, what ground commanders wanted was for air strikes against targets near their front lines to be directed by the front lines. A solution that eventually seemed satisfactory was to send teams from the LFCSA (presumably with a broader vision of the battle space) forward to the front lines to direct specific strikes.¹⁴⁸

Complaints of time delays continued to be strong from the ground commanders, despite the more successful CAS operations on Tinian and Guam. While the increased role of the LFCSA in directing strikes on Guam helped shave off a minute or two, delays for CAS of 30 minutes to an hour continued to be the price paid for centralized control of close support aircraft.¹⁴⁹ The bottom line is "the ground forces would have been the first to complain had less rigid control led to more frequent instances of casualties to friendly troops from misdirected air strikes."¹⁵⁰

CAS in the Palaus

Prior to continuing the drive toward Japan, Central Pacific (CENPAC) forces were diverted south to invade the three southernmost islands of the Palaus—Peleliu, Ngesebus, and Angaur. Peleliu was assaulted first (D day 15 September 1944) and brought about some of the hardest fighting in the war.¹⁵¹

Air support for Peleliu was what had become standard for CENPAC operations—a 50-plane attack on targets on or near the beach under Plan Victor, without interfering with naval gunfire.¹⁵² Then, as landing craft approached the beach, fighters strafed, moving farther inland as the landing craft drew closer. Japanese opposition to the landing was intense, exacting heavy casualties; then they withdrew to the interior of the island where they were able to hold out for over two months—even after the other two islands had been secured. While CAS operations received some criticism, the real lesson of Peleliu was the terrain of its interior—steep coral ridges, some several hundred feet high, with innumerable caves. Peleliu served to foreshadow operations on Iwo Jima, Okinawa, and Luzon; and the lesson was "superior firepower was in itself not enough to rout fanatical Japanese from cave positions."¹⁵³

Circular Letter AL11

The experience and lessons learned from these campaigns led to the October 1944 release of Circular Letter AL11, *Support Aircraft—Organization*,

Training, and Operations, by the commander of Amphibious Forces, US Pacific Fleet.¹⁵⁴ This letter was basically a directive on CAS organization and procedure. First, it delineated the various types of air support for amphibious operations, specifying who would have command of each type. Then it outlined in detail the C² relationships for CAS discussed in this study, describing the various duties and responsibilities of key players in the process such as the CSA, the LFCSA, the air coordinator, and ALPs.

Additionally, the staff structure of the CSA aboard the C² ship was formalized as the primary control unit for CAS and was now designated as the air support control unit (ASCU).¹⁵⁵ Accordingly, the CSA was now referred to as the commander, air support control unit (CASCUS).¹⁵⁶ Likewise, what had previously been known as the LFCSA was now to be referred to as the commander, landing force air support control unit (LFASCU)—these new standardized labels are used in the remainder of this study as well.¹⁵⁷

Finally, AL11 discussed the proper procedures for requesting CAS strikes, using the 11 radio circuits designated for air support control, making dry runs, and marking friendly front lines and enemy targets.¹⁵⁸ Overall, Circular Letter AL11 marked the emergence of mature CAS “doctrine” for the Central Pacific and would be employed in two more major battles—Iwo Jima and Okinawa. However, Iwo Jima and Okinawa would confirm what Peleliu had foreshadowed: “that cave warfare combined with the fight-until-death characteristic of the Japanese soldier had partially neutralized America’s superior firepower.”¹⁵⁹

The Assault on Iwo Jima

The assault on Iwo Jima in the Volcano Islands (D day 19 February 1945) was considered so essential it was dubbed the “inevitable island.”¹⁶⁰ Iwo Jima had three airfields that the Japanese immediately repaired whenever they were bombed, and they posed a serious threat to the B-29s based in the Marianas.¹⁶¹ Iwo Jima lay in the flight path between the Marianas and Japan, forcing the B-29s to waste time and fuel in diverting around it and putting them at considerable risk in the process.¹⁶²

Once captured, the airfields on Iwo Jima would serve as a base for Seventh Air Force long-range fighters (P-38s and P-51s were beginning to arrive in theater) to conduct very long range (VLR) escort of the B-29s over Japan, as well as independent VLR bombing strikes against the Japanese homeland.¹⁶³ In American hands, the airfields on Iwo Jima would also serve as emergency landing fields for crippled B-29s returning from strikes over Japan—more than 2,400 such landings were made before the war’s end—some even before the island was completely secured.¹⁶⁴

Iwo Jima was a pork-chop shaped island made up of soft stone and black volcanic sand and ash that had risen from the sea early in the twentieth century approximately 750 miles north of Saipan and 650 miles southeast of Tokyo.¹⁶⁵ While only five thousand yards wide and nine thousand yards

long, Iwo Jima was ideal for defense because of the countless natural caves it contained and due to the efforts of a garrison of more than 20,000 Japanese who expertly camouflaged guns, blockhouses, and pillboxes and built numerous artificial caves as well.¹⁶⁶ It was a good thing there was only one inevitable island, because for the first time since Bataan and Corregidor there would be an American casualty for each Japanese life taken on Iwo Jima.¹⁶⁷

Preliminary Strikes

After the 30th Bomb Group of the Seventh Air Force moved forward to Saipan in August 1944, strikes began on the Volcano and Bonin Islands. Aside from the three airfields on Iwo Jima in the Volcano Islands, the Bonin Islands (Chichi Jima and Haha Jima) also lay midway between Saipan and Tokyo and had large harbors and an airfield that needed to be neutralized.¹⁶⁸ On 10 August 1944, B-24s from the 30th Bomb Group struck Iwo Jima for the first time, and the on the next two days bombed Chichi Jima and Haha Jima in the Bonins as well. Over the course of more than 30 missions against the Volcano and Bonin Islands in August and September 1944, the B-24s had to deal with enemy fighters alone and without escort.

On 21 October 1944, however, 16 battered P-47Ds of the 318th Fighter Group flew more than 1,400 miles round-trip to a point south of Iwo Jima to escort their heavy bomber brothers home after their bomb run on Iwo Jima.¹⁶⁹ What were really needed though were longer-legged fighters, and in November 1944 long-range P-38 fighters began arriving in the Marianas from Hawaii.¹⁷⁰ From November 1944 until D day for Iwo Jima (19 February 1945), Seventh Air Force P-38s based out of Saipan flew more than 253 missions against Iwo Jima (round-trips of almost 1,700 miles) both escorting the heavy bombers and making strafing runs against strongly defended Iwo Jima installations.¹⁷¹ On 11 February 1945, the P-38s surprised the Japanese at Iwo Jima, who were planning an air strike against Saipan, and shot down four enemy bombers and three enemy fighters—halting the attack before it began.¹⁷²

From December 1944 to the invasion on 19 February 1945, not a day passed without the Liberators of the Seventh Air Force pasting Iwo Jima at least once.¹⁷³ The largest single strike against Iwo Jima was a joint mission on 8 December 1944 involving 102 B-24s and 61 B-29s, followed by a Navy cruiser division bombarding Iwo Jima from offshore.¹⁷⁴

Overall, from August 1944 to D day on 19 February 1945, 5,582 tons of explosives by Seventh Air Force B-24s; 1,223 tons by XXI Bomber Command B-29s; 2,405 tons by naval surface craft; and 406 tons by naval aircraft had been dropped on Iwo Jima.¹⁷⁵ Despite what amounted to the equivalent of two tons of steel an acre for the entire island, the chief effect was for the enemy to build more and better defenses underground—the result being the Japanese were stronger on Iwo Jima in February 1945 than they had been in August 1944.¹⁷⁶

CAS on Iwo Jima

On D day (19 February 1945) for Iwo Jima, to allow simultaneous naval gun and air bombardment, Plan Victor was implemented, placing a ceiling of 1,100 feet for naval guns and a floor of 1,500 feet for strike aircraft within a circle of 2,500 yards' radius centering on the target. When low-altitude air strikes were needed, Plan Negat was implemented whereby no trajectories by artillery, mortar, or naval gunfire were allowed within the same radius of the target.¹⁷⁷

To coordinate the air, ground, and naval gunfire during the assault phase, representatives from corps artillery, naval gunfire, and the CASCUS were placed together in the joint operations room aboard the C² ship.¹⁷⁸ While artillery was to be called off by the corps representative using a radio net common to all artillery units, mortar fire had to be turned off by the air liaison officer (ALO) of the battalion requesting the strike.¹⁷⁹

For air support during the assault on Iwo Jima, planes from 17 CVEs and 16 fast carriers were available.¹⁸⁰ However, the recently implemented kamikaze tactics of the Japanese made it necessary to increase the fighter strength of US carriers, making fewer bombers—and less firepower—available for D-day bombardment.¹⁸¹ To make matters worse, of the 45 B-24s dispatched from the Marianas to assist with D-day bombardment, 29 had to be aborted—either arriving too late, or being separated from the formation, or suffering malfunctions.¹⁸² Despite these setbacks, air and naval bombardment during the assault phase at least kept the Japanese in their shelters long enough for the first two waves to reach the shore without serious opposition.¹⁸³

Japanese resistance became strong, though, when the Marines got 200 yards inland from the beaches, and thereafter the requests for CAS came pouring in.¹⁸⁴ Most requests for CAS were granted that first day, and more than 700 sorties were flown in support of the Marines by nightfall.¹⁸⁵ While progress on D day was not as much as originally hoped for on Iwo Jima, CAS contributed significantly by keeping the Japanese in their holes while the troops established themselves ashore.¹⁸⁶ It is doubtful, however, that airpower did much more than that during the assault phase, since later evaluations determined that Japanese caves and dugouts were all but impervious to air attack; and the open emplacements in the volcanic sand could only be taken out by a direct hit.¹⁸⁷

Another disappointment during this operation was the performance of napalm, which despite high hopes had ineffective results stemming from problems with the release mechanism.¹⁸⁸ An AAF evaluation board subsequently determined that of some 200 releases, only 15 to 20 ignited and suggested that two igniters per tank instead of just one should have been used at Iwo Jima. Aggravating the result was the navy procedure of dropping the tanks from six hundred feet in a steep dive, causing the igniter to tear out of the tank due to tumbling.¹⁸⁹ While the Marine F4Us got

better results dropping the tanks from level flight at 150 feet, still only one in four ignited.¹⁹⁰

The fast carriers of Task Force 58 remained at Iwo Jima until 22 February 1945; and while they did, planes for CAS were plentiful and missions were timely.¹⁹¹ For example, during the assault of Mount Suribachi, CAS strikes were often accomplished within 15 to 30 minutes of the request.¹⁹² However, after the fast carriers departed, the quantity and quality of CAS dropped significantly.¹⁹³

Aside from the obvious reason of the lack of planes available from the remaining CVEs to handle all the CAS requests, two other reasons contributed to the decline in quality of CAS on Iwo Jima. First, when the 3d Marine Division was committed from reserve, the addition of their ALPs to the SAR net overloaded the circuit, a condition aggravated by occasionally poor radio discipline as well.¹⁹⁴ Second, after the Marines had taken Mount Suribachi, there were no distinguishing terrain features left on Iwo Jima to help guide the pilots to their targets.¹⁹⁵

While it was asserted that the CVE pilots were not as good as the fast carrier pilots, there was little evidence to support that position.¹⁹⁶ What did negatively affect the quality of their CAS was armament that was unsuitable for the targets.¹⁹⁷ One hundred-pound bombs were the primary ordnance available on the CVEs, and they were little more effective than .50-caliber machine guns against the Japanese caves and dugouts—only infantry demolition squads were consistently effective against these targets.¹⁹⁸ Additionally, with the operation lasting so much longer than originally expected, by 1 March 1945 the CVEs had used up most of their aircraft armament.¹⁹⁹

Rockets proved useful if a direct hit could be achieved, but pinpointing targets on Iwo Jima was very difficult indeed.²⁰⁰ For example, on one mission, four torpedo bombers and two fighters were called in on a mortar position; and the weather was good when the ground observer reported the target position after the smoke shell was exploded. However, only one pilot in six spotted it—a 12 by 6-foot position with a metal cover like a cellar door—and led the other planes in on the target. The mission was successful, but the mortar's destruction took 56 rockets, eight 500-pound bombs and almost 5,000 rounds of .50-caliber ammunition.²⁰¹

After the initial assault, Iwo Jima became the first operation in the Central Pacific where a land-based commander, called the LFASCU, effectively controlled CAS.²⁰² The unit, commanded by a Marine colonel, was put ashore on D plus 7 (26 February 1945), and on 1 March 1945 took over control of all CAS missions.²⁰³ Control of the CAP, antisubmarine patrols, and air-sea rescue operations remained on board the C² ship with the CASCU.²⁰⁴ While there were no complaints about the effectiveness of the LFASCU control of CAS, it is interesting that while the Marines were able to effect ground control of CAS in this manner, it was still not feasible to use the forward ALPs to direct CAS strikes.²⁰⁵ The air coordinator was still necessary to the process or, if ground direction all the way to the target

was necessary, a control team had to be sent to the front from the LFASCU itself.²⁰⁶ The bottom line was the LFASCU implemented at Iwo Jima was an effective, acceptable compromise between the Navy's desire for centralized control and the Marine's desire for frontline control by the ALPs.²⁰⁷

Another innovation implemented after the assault phase on Iwo Jima was the establishment of the fire support coordination center (FSCC) ashore—an organization still critical to effective CAS today. The FSCC was a duplicate unit of the one used in the joint operations room of the C² ship during the assault phase to coordinate naval, air, and artillery gunfire—consisting of representatives from corps artillery, naval gunfire, and the CASCUS.²⁰⁸ The FSCC monitored all support requests, determined which arm was best to support the mission, and coordinated all the arrangements.²⁰⁹ While the FSCC may have delayed strikes a bit while it coordinated the action, no strikes had to be called off because artillery could not be stopped.²¹⁰ Additionally, the fact that Marines on Iwo Jima were seldom, if ever, bombed or strafed by friendly airpower—despite the high number of CAS sorties flown—is evidence enough of the effectiveness of the FSCC.²¹¹

Finally, Seventh Air Force P-51s began arriving on Iwo Jima on 6 March 1945 and, while the Mustang pilots had no experience with CAS operations, they learned quickly with the help of the LFASCU and the ACs.²¹² Most sources state that overall, the Army pilots gave the Marines better CAS on Iwo Jima than the Navy planes from the CVEs.²¹³ One possible reason for this is that the AAF pilots were fresher than Navy pilots—who had been flying high-tempo combat CAS missions for almost a month by this time.²¹⁴ Additionally, by the time the Mustangs went into action, the LFASCU controllers were very skillful in directing CAS operations and much of the camouflage had also been stripped from CAS targets by all the bombing and shelling.²¹⁵ However, in the end, the Army pilots were superb fliers operating one of the best airplanes employed in World War II, and they were pressing their attacks lower than any of the Navy planes—which endeared them to the Marines.²¹⁶

Overall, preliminary bombardment at Iwo Jima, while not a failure, was a disappointment—indications being that installations damaged and casualties inflicted were not as great as hoped. However, CAS at Iwo Jima was much more effective, with notable innovations like the LFASCU, the FSCC, and sending teams forward from the LFASCU to direct strikes.²¹⁷ Additionally, while infantry-tank teams were required to destroy most enemy positions, CAS did destroy others—the P-51s were particularly noteworthy in this regard.²¹⁸

However, in the end, cave defenses and the bravery of Japanese soldiers unwilling to surrender all but nullified the superiority of American firepower—"the Japanese soldier continued to inflict casualties until he was either killed or sealed in alive."²¹⁹

Capture of Okinawa

While D day for the assault on Okinawa was set for 1 April 1945, seizure of other islands in the vicinity were also necessary. First, islands in the Kerama Retto to the west of Okinawa were invaded on 27 March 1945 to secure an anchorage for the fleet.²²⁰ Additionally, the heavily defended island of Ie Shima, a small island several miles to the west of Okinawa was invaded on 16 April 1945—an important site for Allied airfields.²²¹ Plans called for the Seventh Air Force (along with the Fifth Air Force) to move bomber and fighter units up to Okinawa and Ie Shima as quickly as possible for the final air assault on Japan in preparation for an invasion of the Japanese home islands in November 1945.²²²

Okinawa was the largest island in the Ryukyu chain (measuring 60 miles long and from two to 18 miles wide) and it lay in the heart of Japanese held territory—Kyushu (350 miles), Formosa (375 miles), Shanghai (525 miles), Korea (700 miles), and Tokyo (825 miles).²²³ The nearest Allied held territory was Luzon, some 650 miles away, and Iwo Jima lay about 875 miles to the east.²²⁴

The assault on Okinawa was the largest amphibious operation of the war in the Central Pacific, and it proved to be the bloodiest as well. Fortunately, it was also the last great battle of World War II.²²⁵

CAS on Okinawa

While air support plans for the invasion of Okinawa did not call for any new procedures, the operation was of significantly greater magnitude than any other to date in the Central Pacific had been, and thus the flexibility of established procedures was sorely tested.²²⁶ For example, on D day (1 April 1945) for Okinawa aircraft were provided from no fewer than seven large carriers, six light carriers, and 18 escort carriers—more than six hundred planes for strafing and troop support participated.²²⁷

To coordinate air support on such a scale, ASCUs were established on six C² ships supporting the invasion, with the one aboard the flagship of the joint expeditionary force commander supervising all the others.²²⁸ To provide for control once command was passed ashore, three LFASCUs were provided—one to support the Tenth Army XXIV Corps, one to support the Marine III Amphibious Corps, and one to coordinate the two from Tenth Army Headquarters.²²⁹

Also, a new feature became part of the Tenth Army on Okinawa—a Tactical Air Force (TAF)—which was to take control of land-based air when available.²³⁰ TAFs, as organizational structures, were nothing new in the European theater; and, at least in principle, it was nothing new here either—land-based air had been used for CAS in the Marianas, Palau, and at Iwo Jima. However, at Okinawa, so much land-based air became available that a separate headquarters was needed.²³¹ TAF at Okinawa was commanded by a Marine Corps officer and would eventually grow to 23

Army and 16 Marine squadrons. However, during the height of the fighting on Okinawa, Marine aircraft were in the majority.²³²

Despite the massive air support and naval gunfire available for the landings on the west coast of Okinawa, the incredible firepower was not needed, since the Japanese commander had decided to concede the beaches and withdrew his forces to the southern end of the island to await the assaulting forces.²³³ So the Marine III Amphibious Corps to the north encountered little resistance and needed little CAS, while the Army XXIV Corps to the south ran into more than 100,000 Japanese defenders and needed all the airpower help they could get.²³⁴

During the first 47 days of the assault on Okinawa, more than 14,000 sorties were flown dropping nearly six thousand tons of bombs, nine hundred tanks of napalm, and firing more than 36,500 rockets and untold rounds of machine-gun ammunition—most within a thousand yards or less of the front lines.²³⁵ Transfer of command ashore went smoothly, and the stand-up of the TAF brought no major changes in the quality of air support on Okinawa—the LFASCUs with III and XXIV Corps continued to direct CAS strikes by both TAF and naval aircraft seamlessly.²³⁶ While the outcome of the campaign was never in doubt, the tenaciousness of the Japanese soldier was remarkable, and CAS was required day after day through June 1945.²³⁷

Based on the large numbers of troops, guns, and planes employed at Okinawa, coordination of artillery, naval gunfire, and CAS was challenging. With the Tenth Army artillery officer in charge and aided by a member of the Headquarters' LFASCU and a naval gunfire officer, an ad hoc Army FSCC was formed—and it was duplicated at the corps level.²³⁸ Regardless of the level, it was the artillery officer who made the final decision of what arm to use in striking a particular target.²³⁹

The end result of these control arrangements was that air operations on Okinawa were carried out more efficiently than in any other of the Central Pacific campaigns.²⁴⁰ Despite the large numbers of sorties flown and bombs dropped over an extended period of time within close proximity of the troops, only 10 instances of bombing or strafing of friendly troops were reported.²⁴¹ The continued use of tactics proven effective in earlier operations, such as marking front lines with panels and colored smoke while marking targets with white phosphorous smoke, certainly helped in this regard as well.²⁴²

Of the various kinds of CAS strikes provided on Okinawa, it was probably the morning strikes preceding infantry attacks to neutralize defensive positions that were the most useful.²⁴³ Additionally, pinpoint attacks against blockhouses, guns, and mortars were effective if the targets could be accurately identified.²⁴⁴ However, even though most caves on Okinawa were artificial, success against them was little better than at Iwo Jima—despite extensive use of rockets and napalm tanks with improved fuses.²⁴⁵

The general consensus was that rockets were more effective than bombs against caves, but artillery was more effective than either of those methods—

and best of all were the tank-infantry teams.²⁴⁶ Napalm, even with reliable fuses, apparently did little more against the caves than burn away the camouflage.²⁴⁷ In the end, though, the addition of rockets and reliably fused napalm did increase the overall effectiveness of air support on Okinawa.²⁴⁸

Overall, virtually every division in action on Okinawa was pleased with the quality of air support provided and, as previously mentioned, CAS was conducted more efficiently on Okinawa than in any other campaign in the Central Pacific.²⁴⁹ The fact that no important new tactics or control procedures needed to be developed or introduced at Okinawa stands as testimony to the soundness of what was developed in preceding campaigns in the Central Pacific.²⁵⁰ Additionally, it boded well that these procedures were flexible enough to handle operations of such an increased scale, since an invasion of the Japanese homeland would require operations of even greater magnitude than those conducted on Okinawa.²⁵¹

The TAF of Tenth Army, while a new organization employed at Okinawa, was an old story in terms of utilizing land-based air for CAS.²⁵² Even the appointment of a Marine officer as the TAF commander, though unusual, was not radical since marine aircraft were the preponderance of assets available during the heaviest period of combat on Okinawa. The TAF commander was also a Marine aviator.²⁵³ Regardless, it was the size of the operation on Okinawa that drove the need to establish a TAF, and more TAFs would have been needed as well to invade the main islands of Japan.²⁵⁴

However, Okinawa also served as another reminder in the Central Pacific that airpower was but one arm of the combined arms team.²⁵⁵ Time and again US forces would be thrown back with heavy losses from assaults on positions that had been bombed, strafed, and shelled.²⁵⁶ The Japanese soldiers, sheltered underground, retained their fight-until-death character and exacted casualties for every yard taken by US forces.²⁵⁷ The bottom line is "Aircraft could, and did, give effective support, but they could not perform the final tasks of sealing the caves and killing the last-ditch Japanese defenders."²⁵⁸

Epilogue

In late February and March of 1945, as airfields on Iwo Jima were captured and repaired, two fighter groups (a third arrived in April 1945) of the Seventh Air Force deployed there with their P-51Ds and began VLR escort missions for the B-29s over the Japanese homeland.²⁵⁹ For example, on 7 April 1945, a total of 108 P-51D Mustangs took off to escort XXI Bomber Command B-29s in a raid over Tokyo—destroying 21 enemy aircraft, probably destroying five others, and damaging seven.²⁶⁰

However, as the B-29s began to fly low-level, night-fire raids over Japan, the need for escort diminished, freeing the fighters to begin their own independent VLR strikes against the Japanese homeland.²⁶¹ These independent VLR fighter strikes against Japan (the first was on 16 April 1945)

would be the major occupation of the fighter groups on Iwo Jima from May 1945 through the end of the war.²⁶²

In May 1945, fighter groups (primarily P-47Ns) of the Seventh Air Force began moving up to Ie Shima; and in June 1945, Seventh Air Force Bomber Groups began to arrive on Okinawa.²⁶³ As early as May 1945, offensive raids by the Seventh Air Force P-47s began against Kyushu airfields on the Japanese islands, prompting retaliatory kamikaze attacks against Ie Shima. However, on 25 May 1945, two P-47N pilots jumped over 30 Zekes during a bombing mission, and Lt Richard H. Anderson became the Seventh Air Force's first ace in a day.²⁶⁴ Similarly, on 28 May 1945 over Kyushu, P-47Ns claimed 17 kills and four probables, with flight-leader Capt John E. Wolfe becoming Seventh Air Force's second ace in a day. Finally, on 13 August 1945, 48 P-47Ns conducted a VLR fighter strike (more than 1,580 miles round-trip) against Keijo, Korea; and in that action, Lt Oscar F. Perdomo became Seventh Air Force's third ace in a day and the last ace of World War II.²⁶⁵

Meanwhile, as Seventh Air Force bombers settled in on Okinawa, they quickly began a steady pounding of Kyushu and other targets on the Japanese homeland.²⁶⁶ On 5 August 1945, in a joint effort with Fifth Air Force, 63 B-24s, 84 B-25s, 32 A-26s, 97 P-47s, and 49 P-51s struck a factory at Tarumizu, Japan, reportedly producing suicide planes.²⁶⁷ On 12 August 1945, the Liberators and Mitchells of the Seventh Air Force flew their last mission of the war.

By this time, so many Seventh Air Force assets had been consolidated at Okinawa, that for the first time since beginning the island-hopping campaign through the Central Pacific the Seventh Air Force was nearly a homogeneous command again. However, it would never be a fully unified command in the usual sense during World War II due to the unique command relationships in the Pacific that placed its units under a variety of commands.²⁶⁸

By now, Headquarters Seventh Air Force was under the Far East Air Forces, along with VII Fighter Command, although VII Fighter Command was operationally under control of Army Air Forces, Pacific Ocean Area (activated 1 August 1944 under command of General Harmon).²⁶⁹ On the other hand, VII Bomber Command was now a component of Tenth Army TAF, commanded by a Marine air general officer.²⁷⁰

Finally, Task Force 59, which General Hale commanded as COMAIRFORWARD, was disbanded on 6 December 1944; and General Hale then served as deputy commander for Operations, Army Air Forces, Pacific Ocean Area (under General Harmon) through the end of the war.²⁷¹ Nevertheless, General Hale had left his mark on the Seventh Air Force. Despite early disappointments such as Midway and Tarawa, the hard study, innovation, and pure determination of the men of the Seventh Air Force significantly improved results later on. In the end, General Hale's legacy was that whatever the job airpower was called on to do across the expansive Central Pacific in World War II, the men of the Seventh Air Force did the job and did it well.

General Hale's desires for postwar were to return to Washington D.C., where his wife (Francis, who he met through his good friend Gen Lewis H. Brereton) and two daughters (Evelyn and Barbara) lived.²⁷² In fact, after the war General Hale would serve as commander of the Fourth Air Force (1945-47), commander of the Ninth and First Air Forces (1949-50), and commander of the Continental Air Command (1951-52). Hale retired in 1952 and died on 25 March 1961.

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Chapter 5

Conclusion

Through what airmen call the "damnedest weather in the world" over vast expanses of ocean where engine failure usually meant death under a broiling sun, they fought through to Japanese bases, ignoring the fact that they had no escorting fighters. It was rough living, rough flying, rough fighting.

New York Times, 16 April 1944

Broad Conclusions

As the scarcity of published literature on the subject attests, the accomplishments of the Seventh Air Force in the Central Pacific in World War II have largely gone unsung. This is unfortunate because this was arguably the most joint theater of World War II. This theater provides many relevant lessons about the challenges of joint C² and the development of joint operational procedures to offer airmen today.

While the Central Pacific was clearly a Navy-dominated theater, it was also the only theater in World War II where all the services were major contributors in most combat operations. Army Air Forces as well as Marine and Navy air units all played vital roles in the success of the island-hopping campaign. With all the services playing major roles in combat in the Central Pacific, not only was Carl von Clausewitz's principle of the inevitable friction in war validated but it was also magnified. Under these circumstances, all the services came to learn the criticality of joint coordination and development of common doctrine and procedures—hard lessons learned over time from the mediocre performance in early campaigns such as Tarawa.

However, learn they did; and while Okinawa was the largest and bloodiest battle in the Central Pacific, the services provided superb interdiction and CAS with the least fratricide of all the battles of the island-hopping campaign. These are results the services would have been incapable of achieving just a year or two earlier. In the end, all three services' air forces developed a level of interoperability and shared doctrine that the US armed forces do not have today.

Another broad conclusion that can be drawn from this study, and also relevant today, is that interdiction and CAS were every bit as important, if not more so, as strategic bombing to the success of combat operations in the island-hopping campaign. Since CAS in particular had been virtually ignored by all the services prior to World War II (despite its significant role late in World War I), this is an area in which all the services displayed

a great deal of innovation in developing a mature, joint doctrine. It is fortunate, despite high casualty rates, that they had the time to develop doctrine in a combat environment. While CAS in the Central Pacific in World War II is not the only time US forces have had to relearn this important mission, it does stand as a model of interservice airpower cooperation that airmen today could look to for useful guidance.

Specific Findings

In exploring specific findings from this study, it is useful to use the context of the three major questions asked in this study. First question: Did personalities matter, and to what extent did they affect the success or failure of combat operations in the Central Pacific? Second, this work examined the extent to which conflicting service cultures were at the root of interservice friction, and how that influenced combat operations? Third question: How did challenges unique to the Central Pacific theater affect the degree of interservice friction and the effectiveness of combat operations?

Overall, the evidence suggests that all three of these issues greatly influenced the development and effectiveness of joint C² and combat procedures in the Central Pacific, though not always in negative ways. Additionally, these areas are not as clearly delineated as one might like them to be for the purpose of analysis, as they tend to overlap and interact with one another. On the one hand service culture sometimes had an aggravating effect on the already stormy relationship between Admiral Hoover and General Hale. On the other hand, however, the unique challenges faced in the Central Pacific tended to have an ameliorating effect on personalities and service cultures, as all the services struggled to learn from their experiences how to cope with the geographic and logistical hurdles presented by the Central Pacific.

It is clear that the services often did not understand or appreciate each other's problems and difficulties in combat. However, at the operational level these problems were overcome through innovation, experience, and the will to adapt.

Personalities Matter—Up to a Point

There can be little doubt from the evidence presented that there was significant personal conflict between General Hale and Admiral Hoover. Adm "Genial John" Hoover was characterized by several sources as a "dour, ill-humored" man, a "pretty stern dose of medicine" who evidently did not hesitate to tell General Hale how to do his job.¹ Gen "Whispering Willis" Hale, on the other hand, was a quiet man, though one who could curl the paint off a Liberator with a whisper. He resented Admiral Hoover's attempts to interfere in the command of his forces and complained about

it to General Richardson.² Clearly, Admiral Hoover and General Hale did not "get along."

However, what is less clear is to what extent this personality conflict affected joint C² and combat operations in the Central Pacific. The difficulty in determining any significant affect is twofold. The first problem is a counterfactual one; it is difficult to demonstrate operations that could have been more effective when, in fact, they did not happen that way. The second problem is an attribution one; even if one can demonstrate degraded effectiveness, one is hard-pressed to attribute it solely, or even primarily, to personality conflict.

For example, from a C² viewpoint, it seems likely that this personality conflict entered into the decision calculus concerning the transfer of operational control of the heavy bombers to General Hale. This conflict was well known among senior military leaders of the time, as several sources attest. According to Craven and Cate, Admiral Nimitz had already insisted all naval commanders of joint units ensure their units are "left free to accomplish assigned tasks by use of their own technique as developed by precept and experience."³ Furthermore, a digest file of a conversation between General Richardson and General Arnold on 2 February 1944 states that Admiral Nimitz had singled out Admiral Hoover, insisting that he give General Hale his missions but desist from telling him how to accomplish them.⁴

The point is that aside from any operational impact, Admiral Nimitz knew there was interpersonal conflict between Admiral Hoover and General Hale and had interceded on General Hale's behalf once before command arrangements were altered. Significantly, General Arnold knew this too; and it is not unreasonable to presume this issue could have served him well as leverage in arguing for the transfer of operational control of the heavy bombers into AAF (General Hale's) hands. While General Arnold's ultimate aim was to secure operational control of the soon-to-be-deployed B-29s for the AAF, it is somewhat ironic that this personality conflict may have served as an asset in his campaign to do this.⁵

There is, however, no direct evidence that the interpersonal friction between Admiral Hoover and General Hale had a relative effect on actual bombing operations. However, if Admiral Nimitz had to intercede to get Admiral Hoover to stop interfering in missions, it is reasonable to infer that operations were not going as smoothly as they would have without such interference. In exploring this issue in regard to operations leading up to the Marshall Islands campaign, it must again be noted there is no direct evidence that personality conflict had a degrading effect on bombing operations. Admiral Hoover and General Hale had fundamental disagreements on the proper employment of the bombers, with Admiral Hoover advocating lower-level bombing runs to achieve increased accuracy.⁶ Furthermore, during the Gilbert and Marshall campaigns, Admiral Hoover served as the supported commander with operational control over all shore-based bombers, while General Hale served as the supporting

commander, supplying Seventh Air Force assets to Admiral Hoover's Task Force 57.⁷

From General Hale's point of view, the neutralization of Nauru, Mille, Jaluit, and Maloelap in preparation for the Marshall Islands campaign was a tall order for his undermanned, underequipped command. Aside from the concern he expressed to General Arnold in his 29 December 1943 letter about his crews beginning to crack, General Hale would no doubt have also been concerned about his ability to carry out this mission if his loss rates for planes and crews increased significantly.⁸ The Pacific theater was still on the tail end of the "Europe First" resupply policy, so General Hale knew that the supply of bombers to get the job done was limited.

While there is no evidence that Admiral Hoover pressured General Hale to employ his B-24s in low-level strikes against the highly defended Maloelap, it is within this context that General Hale switched to night attacks in early January 1944, after losing 11 Liberators over Maloelap in December 1943.⁹ Similarly, after losing 17 B-25s over Maloelap from December 1943 to 12 February 1944, General Hale ordered the Mitchell bombers to increase from low to medium altitude for all their bombing attacks. Interestingly, these decisions were made by the supporting commander (General Hale) and not by the supported commander (Admiral Hoover) who was vested with operational command of the bombers—and the decisions stuck.

That there was a high degree of friction between General Hale and Admiral Hoover during this period is clear. In fact, it was on 2 February 1944 that the previously mentioned telephone call between General Richardson and General Arnold had been placed, discussing how Admiral Nimitz had insisted that Admiral Hoover cease dictating tactics for General Hale's missions.¹⁰ Furthermore, it is during this period that General Hale complained about Admiral Hoover to General Richardson, prompting both a letter of protest from General Richardson to Admiral Nimitz and a trip by both Generals Richardson and Hale to Washington purportedly to address this issue.¹¹

Thus, while there is no direct evidence of Admiral Hoover ordering General Hale to send his bombers in low, the bombing operations against Maloelap, while ultimately successful were very costly; and General Hale was obviously extremely displeased over Admiral Hoover's interference in these missions. Taken together, these incidents are a good example of how personalities can affect the quality of combat operations.

Service Cultures Matter—Up to a Point

In addition to personality conflicts, or perhaps even fueling them, differences in service perspectives can affect the development of joint C² and operational procedures. On the one hand, General Hale was a heavy bomber pilot and a graduate of ACTS.¹² Not surprisingly, he was an advocate of high-altitude, precision bombing using massed formations.¹³ On the other hand, Admiral Hoover was a naval air officer who believed

low-level bombing such as that performed by naval dive-bombers was the more effective approach.

These divergent opinions reflected the service cultures that spawned these two senior leaders and at least partially explain a fundamental misunderstanding and/or lack of appreciation between these services in the Central Pacific as to the nature of each other's combat. While the Navy was primarily concerned with the most effective tactics for fleet protection and fast amphibious assaults, the AAF was more concerned about the survivability of long-overwater bombing missions where the unescorted crews would have to fight off intercepting enemy fighters.

To the extent that service cultures helped breed a lack of appreciation for the problems of the other services and aggravated personality conflicts as already noted, the service cultures generated friction that had to be overcome to produce effective C² and joint doctrine. Yet each of the services' unique perspectives and experience helped generate innovative methods for the employment of its own aircraft and the development of joint procedures.

Unique Challenges Matter—Innovation and the Will to Overcome Them Is the Point

While personalities and service perspectives were important, they were not the only factors influencing joint C² and the development of joint doctrine in the Central Pacific. There were unique geographic challenges in the Central Pacific. Most notable were the distances between islands that stretched aircraft and logistics to the limit, the small size of the islands that prevented maneuver of joint forces in close quarters, and later the volcanic caves that degraded airpower's effectiveness against the entrenched Japanese. These challenges were of such severity that it quickly became clear that all the services would have to work as a team to overcome them, and thus they had an ameliorating effect on personality conflicts and service parochialism.

For example, from a C² perspective—despite being a Navy-led, Navy-dominated theater—service parochialism was quickly put aside as warriors with the experience to overcome the unique challenges of the Central Pacific were called on to take charge, regardless of their service. Additionally, while it was tradition that the service bringing the most assets to the fight would have operational control, this also was not always the case in the Central Pacific—most notably in the CAS arena.

During the campaign for the Gilberts, an AAF officer, Col William O. Eareckson, was appointed as CSA for the entire operation, despite the fact that no AAF aircraft participated in the assaults on Makin or Tarawa.¹⁴ The reason for this choice for command was that Colonel Eareckson had gained valuable CAS experience at Attu, the only real model for CAS available for the Navy prior to beginning the island-hopping campaign.¹⁵ Interestingly, Colonel Eareckson would later serve as naval CSA during the Hollandia-Aitape Operation.¹⁶ Similarly, while it was a primary mission

for AAF fighters to provide island air defense in the forward area, during Operation Galvanic in the Gilberts it was General Merritt, USMC, who had operational control of all the fighters.¹⁷ Later, at Okinawa, a Marine air general officer commanded the TAF, despite its eventual strength of 23 Army squadrons to only 16 Marine squadrons.¹⁸

During the course of the island-hopping campaign through the Central Pacific, there was a great deal of innovation, and much of it was joint. For example, the innovative use of virtually any bomber or fighter in a close support role stands as testimony to the flexibility and versatility of air-power.¹⁹ As we have seen, while heavy bombers were consistently used for preparatory bombing prior to planned assaults, they were also employed during assault phases in an interdiction role as needed, despite the close quarters on these small islands in the Central Pacific. Furthermore, medium bombers were used, especially at Okinawa for close support missions—their rockets and .50-caliber machine guns helping to root out the Japanese from deeply entrenched positions. Finally, virtually every kind of AAF, Navy, and Marine fighter and dive-bomber available was utilized in close support roles throughout the island-hopping campaign.

Important impressions were spawned from the hard lessons learned at Tarawa—that coordination was critical to CAS and that good liaison was the key to good coordination among artillery, naval gunfire, and air-power.²⁰ The JCS-directed JASCO with its ALPs was an innovative first attempt at improved coordination and was implemented during the drive through the Marshalls. However, innovation in this area was ongoing throughout the island-hopping campaign evident in the emergence of the LFASCU and in the development of the FSCC—an organizational construct still used to coordinate CAS today.²¹

Through these agencies, the CSA was able to maintain centralized control of CAS aircraft, which was absolutely necessary in order to minimize the potential harm to friendly forces—especially in the Central Pacific where combat was confined to small areas. However, in a creative twist, these agencies could be used to support decentralized control and direct fire from the front lines if needed. While the ALPs had originally been conceived of as a vehicle to achieve this capability, they were never able to effectively control CAS strikes, since in the constrained spaces of the Central Pacific, the ALPs might inadvertently bring fire down on friendly forces they were unaware of on their flanks. Accordingly, in the Central Pacific, ACs, working with the ALPs played an ever-increasing role in directing CAS. However, on Iwo Jima and Okinawa, small teams from the LFASCUs would move forward to the front lines to control planes providing CAS, when desired.²²

An innovation from the Marshall Islands campaign was the tactic of employing fighters in strafing runs perpendicular to the beach, increasing the opportunity for bullets to penetrate into enemy foxholes and trenches.²³ Finally, from the Mariana Islands campaign on, a major innovation was the technique called Plan Victor which allowed simultaneous air

and naval bombardment by restricting naval gun trajectories below 1,200 feet and restricting aircraft to altitudes above 1,500 feet.²⁴

All these examples of innovation serve to highlight the willpower and determination of all the services to study, learn from, and overcome the severe challenges they faced in combat in the Central Pacific in World War II. General Hale said it best in his 29 December 1943 letter to General Arnold: "Notwithstanding these grueling flights, lousy living conditions, field rations, no amusement or recreation, no hope if disabled, no fighter cover, yet out they go, once every three or four days, their continued willingness and 'guts' unshaken."²⁵

Notes

1. Thomas B. Buell, *The Quiet Warrior, A Biography of Admiral Raymond A. Spruance* (Toronto, Canada: Little, Brown and Co., 1974), 216; Capt Alexander Monroe, retired, E-mail memorandum to Maj Peter S. H. Ellis, 16 March 2000, 9:53 A.M.; and Digest of Seventh Air Force Incoming Cables, October 1943–November 1944, Maxwell AFB, Ala., Air Force Historical Research Agency, file no. 740.1622.
2. *New York Times*, 16 April 1944, 1; Forrest Davis, "Hale's Handful," *Saturday Evening Post*, 18 July 1944; and Buell, 216.
3. Wesley Frank Craven and James Lea Cate, eds., *The Army Air Forces in World War II*, vol. 4, *The Pacific: Guadalcanal to Saipan, August 1942 to July 1944* (Chicago, Ill.: University of Chicago Press, 1950), 674.
4. Digest of Seventh Air Force Incoming Cables, October 1943–November 1944.
5. Craven and Cate, 675.
6. Buell, 215.
7. Craven and Cate, 304.
8. Gen Willis H. Hale, memorandum to Gen Henry H. Arnold, 29 December 1943.
9. Kenn C. Rust, *Seventh Air Force Story . . . in World War II* (Temple City, Calif.: Historical Aviation Album, 1979), 14.
10. Digest of Seventh Air Force Incoming Cables, October 1943–November 1944.
11. Buell, 215; and E. B. Potter, *Nimitz* (Annapolis: Naval Institute Press, 1976), 284.
12. Gen Willis H. Hale, Press Release, 31 January 1942.
13. Buell, 216.
14. Joe G. Taylor, *Close Air Support in the War against Japan*, USAF Historical Study 86 (Maxwell AFB, Ala.: USAF Historical Division, Air University, 1955), 137.
15. *Ibid.*, 134, 137.
16. *Ibid.*, 137.
17. Craven and Cate, 293.
18. Taylor, 209.
19. *Ibid.*, 342.
20. *Ibid.*, 343.
21. *Ibid.*
22. *Ibid.*, 180, 344–45.
23. *Ibid.*, 147.
24. *Ibid.*, 173.
25. Hale memorandum to Arnold, 29 December 1943.